

THE AUTHOR'S P R E F A C E TO THE READER.

GUIDED by a natural inclination, I gave myself up in my most early years to the study of architecture: and as it was always my opinion, that the antient Romans, as in many other things, so in building well, vastly excelled all those who have been since their time, I proposed to myself VITRUVIUS for my master and guide, who is the only antient writer of this art, and set myself to search into the reliques of all the antient edifices, that, in spight of time and the cruelty of the Barbarians, yet remain; and finding them much more worthy of observation, than at first I had imagined, I began very minutely with the utmost diligence to measure every one of their parts; of which I grew at last so sollicitous an examiner, (not finding any thing which was not done with reason and beautiful proportion) that I have very frequently not only travelled in different parts of Italy, but also out of it, that I might intirely, from them, comprehend what the whole had been, and reduce it into design.

Whereupon perceiving how much this common use of building was different from the observations I had made upon the said edifices, and from what I had read in VITRUVIUS, LEON BATTISTA ALBERTI, and in other excellent writers who have been since VITRUVIUS, and from those also which by me have lately been practised with the utmost satisfaction and applause of those who have made use of my works; it seemed to me a thing worthy of a man, who ought not to be born for himself only, but also for the utility of others, to publish the designs of those edifices, (in collecting which, I have employed so much time, and exposed myself to so many dangers) and concisely to set down whatever in them appeared to me more worthy of consideration; and moreover, those rules which I have observed, and now observe, in building; that they who shall read these my books, may be able to make use of whatever will be good therein, and supply those things in which (as many perhaps there may be) I shall have failed; that one may learn, by little and little, to lay aside the strange abuses, the barbarous inventions, the superfluous expence, and (what is of greater consequence) avoid the various and continual ruins that have been seen in many fabricks.

I applied myself the more willingly to this undertaking, as I see great numbers of persons at this time applying themselves to the study of this profession, many of which are worthily and honourably mentioned in the books of Messer GIORGIO VASARI ARETINO, a painter and rare architect.

I therefore hope, that the manner of building may with universal utility be reduced, and soon brought to that pitch of perfection, which in all the arts is greatly desired, and to which it seems that this part of Italy is very nearly arrived; since that not only in Venice, where all the good arts flourish, and which

P R E F A C E.

which only remains as an example of the *grandeur* and *magnificence* of the Romans, one begins to see fabricks that have something good in them, since Messer GIACOMO SANSOVINO, a celebrated sculptor and architect, first began to make known the beautiful manner, as is seen (not to mention many other beautiful works of his) in the new Procuratia, which is the richest and most adorned edifice, that perhaps has been made since the antients; but also in many other places of less fame, particularly in Vicenza, a city of no very large circumference, but full of most noble intellects, and abounding sufficiently with riches; and where I had first an opportunity to practise what I now publish for common utility, where a great number of very beautiful fabricks are to be seen, and where there have been many gentlemen very studious in this art, who, for their nobility and excellent learning, are not unworthy to be numbered among the most illustrious; as Signor GIOVAN GIORGIO TRISSINO, the splendor of our times; the Counts MARC' ANTONIO and ADRIANO DE THIENI, brothers; Signor ANTENORE PAGELLO, Knight; and besides these, who are passed to a better life, having eternized their memory in their beautiful and most adorned fabricks, there is now Signor FABIO MONZA, intelligent in a great many things; Signor ELIO DE BELLi, son of Signor VALERIO, famous for the artifice of camei's and engraving in crystal; Signor ANTONIO FRANCESCO OLIVIERA, who, besides the knowledge of many sciences, is an architect, and an excellent poet, as he has shewn in his Alemana, a poem in heroick verse, and in a fabrick of his at Boschi di Nanto, a place in the Vicentine; and lastly, (to omit many more, who might very deservedly be placed in the same rank) Signor VALERIO BARBARANO, a most diligent observer of all that belongs to this profession.

But to return to our subject: As I am to publish those labours that I have from my youth hitherto undergone, in searching and measuring (with the greatest care and diligence I could) all those antient edifices that came to my knowledge; and upon this occasion, in a few words, to treat of architecture, as orderly and distinctly as was possible for me; I thought it would be very convenient to begin with private houses, because one ought to believe, that those first gave rise to publick edifices; it being very probable, that man formerly lived by himself; but afterwards, seeing he required the assistance of other men, to obtain those things that might make him happy, (if any happiness is to be found here below) naturally sought and loved the company of other men: whereupon of several houses, villages were formed, and then of many villages, cities, and in these publick places and edifices were made.

And also because of all the parts of architecture there is none so necessary to mankind, nor that is oftener used than this, I shall therefore first treat of private houses, and afterwards of publick edifices; and shall briefly treat of streets, bridges, piazzes, prisons, basiliche (which are places of justice) xisti, palestre (which are places where men exercised themselves) of temples, theatres, amphitheatres, arches, baths, aqueducts; and lastly, of the manner of fortifying cities and sea-ports.

And in all these books I shall avoid the superfluity of words, and simply give those directions that seem to me most necessary, and shall make use of those terms which at this time are most commonly in use among artificers.

And

And because I cannot promise any more myself, (save the long fatigue, great diligence, and the love that I have bestowed to understand and practise what I now offer,) if it pleases GOD that I may not have laboured in vain, I shall heartily thank his goodness; acknowledging withal, myself obliged to those, that from their beautiful inventions, and from the experience they had, have left the precepts of such an art, because they have opened a more easy and expeditious way to the discovery of new things, and that by their means we have attained to the knowledge of many things, which perhaps had otherwise been hid.

The first part shall be divided into two books; in the first shall be treated of the preparation of the materials, and when prepared, how, and in what manner, they ought to be put to use, from the foundation up to the roof: where those precepts shall be, that are universal, and ought to be observed in all edifices, as well private as publick.

In the second I shall treat of the quality of the fabricks that are suitable to the different ranks of men: first of those of a city; and then of the most convenient situation for villa's, and in what manner they are to be disposed.

And as we have but very few examples from the antients, of which we can make use, I shall insert the plans and elevations of many fabricks I have erected, for different gentlemen, and the designs of the antients houses, and of those parts which are most remarkable in them, in the manner that VITRUVIUS shews us they were made.

E R R A T A.

PAG E 5. line 24. read *Giovanni*. l. 29. r. *Damiano*. l. 30. r. *St. Agnes*, now called *Santa Agnese*. l. 31. r.
Numentana. p. 6. l. ult. r. *Tofo*. p. 10. l. 18. r. modiglions. p. 22. l. 6. r. dentelli only. p. 25. l. 5. *dele* may.
p. 27. l. 38. r. *Paduan*. p. 31. l. 44. r. *regolo*. p. 32. l. 1. r. triangle.

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T H E

T H E F I R S T B O O K
O F
Andrea Palladio's
A R C H I T E C T U R E.

C H A P T E R I.

Of the several particulars that ought to be consider'd and prepar'd before we begin to build.

GR EAT care ought to be taken, before a building is begun, of the several parts of the plan and elevation of the whole edifice intended to be raised: For three things, according to VITRUVIUS, ought to be considered in every fabrick, without which no edifice will deserve to be commended; and these are utility or convenience, duration and beauty. That work therefore cannot be called perfect, which should be useful and not durable, or durable and not useful, or having both these should be without beauty.

A N edifice may be esteemed commodious, when every part or member stands in its due place and fit situation, neither above or below its dignity and use; or when the *loggia's*, halls, chambers, cellars and granaries are conveniently disposed, and in their proper places.

T H E strength, or duration, depends upon the walls being carried directly upright, thicker below than above, and their foundations strong and solid: observing to place the upper columns directly perpendicular over those that are underneath, and the openings of the doors and windows exactly over one another; so that the solid be upon the solid, and the void over the void.

B E A U T Y will result from the form and correspondence of the whole, with respect to the several parts, of the parts with regard to each other, and of these again to the whole; that the structure may appear an entire and compleat body, wherein each member agrees with the other, and all necessary to compose what you intend to form.

W HEN those several particulars have been duly examined upon the model or draught, then an exact calculation ought to be made of the whole expence, and a timely provision made of the money, and of those materials that shall seem most necessary, to the end that nothing may be wanting, or prevent the completing of the work. In so doing, the builder will not only be commended; but it will also be of the utmost advantage to the whole structure, if the walls are equally and expeditiously carried up: for being thus dispatch'd, they will settle proportionably, every where alike, and not be subject to those clefts so commonly found in buildings that have been finish'd at divers times.

T HEREOFRE, having made choice of the most skilful artists that can be had, by whose advice the work may the more judiciously be carried on, you must then provide a sufficient quantity of timber, stome, sand, lime and metals; concerning which provision I intend to lay down some very useful directions. There must also be a sufficient number of joysts, to frame the floors of the halls and chambers; which ought to be disposed and placed in such a manner, that the distance betwixt each joyst may be the width of one joyst and an half when they are framed together.

C H A P. XI.

Of the diminution of walls, and of their several parts.

IT ought to be observed, that walls should diminish in proportion as they rise; therefore those which appear above ground must be but half as thick as the walls in the foundations; those of the second story half a brick thinner than the walls of the first; and in this manner to the top of the building; but with discretion, that the upper part be not too thin.

THE middle of the upper walls ought to fall directly upon the middle of the lower, which will give the whole wall a pyramidal form. But when you are willing to make the superficies or face of the upper walls to fall directly upon the lower, it must be done towards the inside of the building; because that the floors, beams or rafters, vaults, and other supports of the fabrick, will keep them from falling or giving way.

THE discharged part, or set-off, which is on the outside, may be covered with a fascia and a cornice; which, surrounding all the building, will be both an ornament, and a kind of bond to the whole. And because the angles partake of the two fides, in order to keep them upright, and united together, they ought to be made very strong and solid with long hard stones, holding them as it were with arms.

THE windows, and other openings, ought be as far distant from the angles as possible; or at least so much space must be left between the aperture and the angles as the width of the opening or void.

HAVING thus treated of plain walls, we shall next consider their ornaments; among which none are more considerable than columns, when they are properly placed, and in a just proportion to the whole edifice.

C H A P. XII.

Of the five orders made use of by the antients.

THE Tuscan, Dorick, Ionick, Corinthian, and Composite, are the five orders made use of by the antients. These ought to be so disposed in a building, that the most solid may be placed undermost, as being the most proper to sustain the weight, and to give the whole edifice a more firm foundation: Therefore the Dorick must always be placed under the Ionick; the Ionick under the Corinthian; and the Corinthian under the Composite.

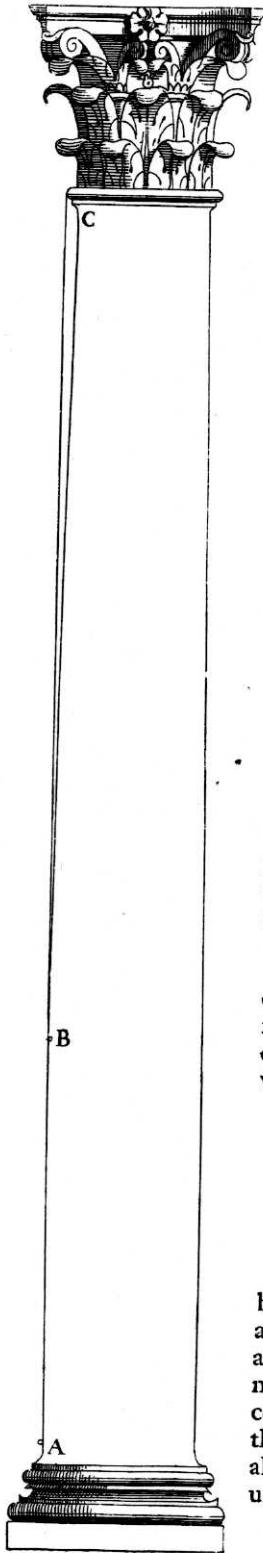
THE Tuscan being a plain rude order, is therefore very seldom used above ground, except in villas, where one order only is employ'd. In very large buildings, as amphitheatres, and such like, where many orders are required, this, instead of the Dorick, may be placed under the Ionick.

BUT if you are desirous to leave out any of these orders, as, for instance, to place the Corinthian immediately over the Dorick, you may, provided you always observe to place the most strong and solid undermost, for the reasons above-mention'd.

THE measures and proportions of each of these orders I shall separately set down; not so much according to VITRUVIUS, as to the observations I have made on several antient edifices. But I shall first mention such particulars as relate to all of them in general.

C H A P. XIII.

Of the swelling and diminution of columns, and of the intercolumniations and pilasters.



THE columns in each order ought to be form'd in such a manner, that the diameter of the upper part of the column may be smaller than at the bottom, with a kind of a swelling in the middle.

IT is to be observed in the diminutions, that the higher the columns are, the les they must diminish; because the height, by reason of the distance, has that effect.

THEREFORE, if the column be fifteen foot high, the thickness at the bottom must be divided into six parts and a half, five and a half of which will be the thickness for the top. If from fifteen to twenty foot high, divide the diameter at the bottom into seven parts, and six and a half will be the diameter above. The same must also be observed in those from twenty to thirty foot high; the lower diameter of which must be divided into eight parts, and seven given to the upper. And so in proportion, columns of a greater altitude ought in the same manner to be diminished, as VITRUVIUS tells us in the second chapter of his third book.

As to the manner of making the swelling in the middle, we have no more to shew from VITRUVIUS but his bare promise; which is the reason that most writers differ from one another upon that subject.

THE method I use in making the profile of the swellings is this; I divide the fust of the column into three equal parts, and leave the lower part perpendicular; to the side of the extremity of which I apply the edge of a thin rule, of the same length, or a little longer than the column, and bend that part which reaches from the third part upwards, until the end touches the point of the diminution of the upper part of the column under the *collarino*. I then mark as that curve directs, which gives the column a kind of swelling in the middle, and makes it project very gracefully.

AND although I never could imagine a more expeditious and successful method than this, I am nevertheless confirmed in my opinion, since Signor PIETRO CATANEO was so well pleased when I told him of it, that he gave it a place in his Treatise of Architecture, with which he has not a little illustrated this profession.

A B, *the third part of the column, which is left directly perpendicular.*

B C, *the two thirds that are diminished.*

C, *the point of diminution under the collarino.*

THE intercolumniations, or the spaces between the columns, may be of one diameter and a half of the column (the diameter being taken at the lowest part of the column.) They also may be of two, two and a quarter, three, or more diameters; but the antients never allow'd more to these spaces than three times the diameter of the column, except in the Tuscan order, where the arachitave was made of timber, the intercolumniations were then very large. Neither did they ever allow less than one diameter and a half, which was the distance they usually observ'd, especially when the columns were very high.

BUT, above all other, they approved of those intercolumniations that were of two diameters and a quarter; and they reckon'd this a beautiful

beautiful and elegant manner of intercolumniation. And it ought to be observed, that there should be a proportion and correspondence between the intercolumniations or spaces, and the columns; because if small columns are placed in the larger spaces, the greatest part of their beauty will be taken away, by the quantity of air, or the vacuity between the spaces, which will diminish much of their thickness. On the contrary, if large columns are placed in small intercolumniations, the straitness or narrowness of the spaces will make them appear clumsy, and without grace. Therefore if the spaces exceed three diameters, the thickness of the columns ought to be a seventh part of their height; as I have observed in the following Tuscan order.

B U T if the spaces are three diameters, the columns ought to be seven and a half or eight diameters high; as in the Dorick order: If two and a quarter, the height of the columns must be nine diameters; as in the Ionick: If but two, the height of the columns should be nine diameters and a half; as in the Corinthian: And, lastly, if of one diameter and a half, the height of the columns must be ten; as in the Composite. In which orders I have taken this care, that they may serve as an example for the different intercolumniations mention'd by VITRUVIUS in the aforesaid chapter.

A N even number of columns ought always to be placed in the fronts of edifices, that an intercolumniation may be made in the middle somewhat larger than the others, that the doors and entries, usually placed in the middle, may be the better seen. And this is sufficient as to simple colonades.

B U T if loggia's are made with pilasters, they ought to be so disposed, that the thickness of the pilasters be not less than one third of the void or space between pilaster and pilaster; and the thickness of those placed in the corners to be two thirds of the said space, that so the angles of the fabrick may be both strong and solid.

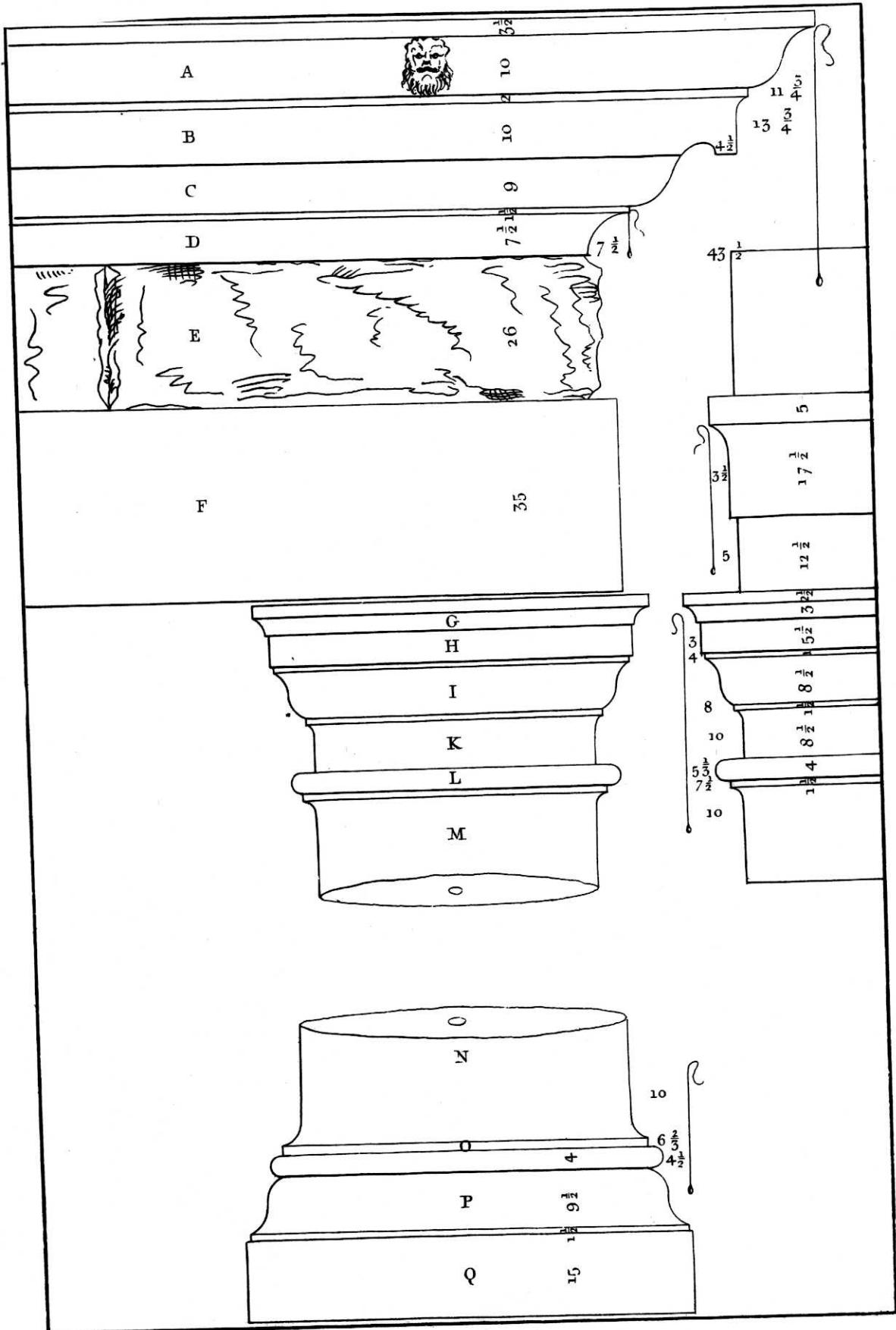
A N D when they are to sustain an exceeding great weight, as in very large buildings, they ought then to be made as thick as half the void, like those of the theatre of *Vicenza*, and the amphitheatre at *Capua*; otherwise their thickness may be two thirds of the said space, as those of the theatre of *Marcellus* at *Rome*, and that of *Ogubio*, now in possession of Signor LUDOVICO DE GABRIELLI, a gentleman of that city.

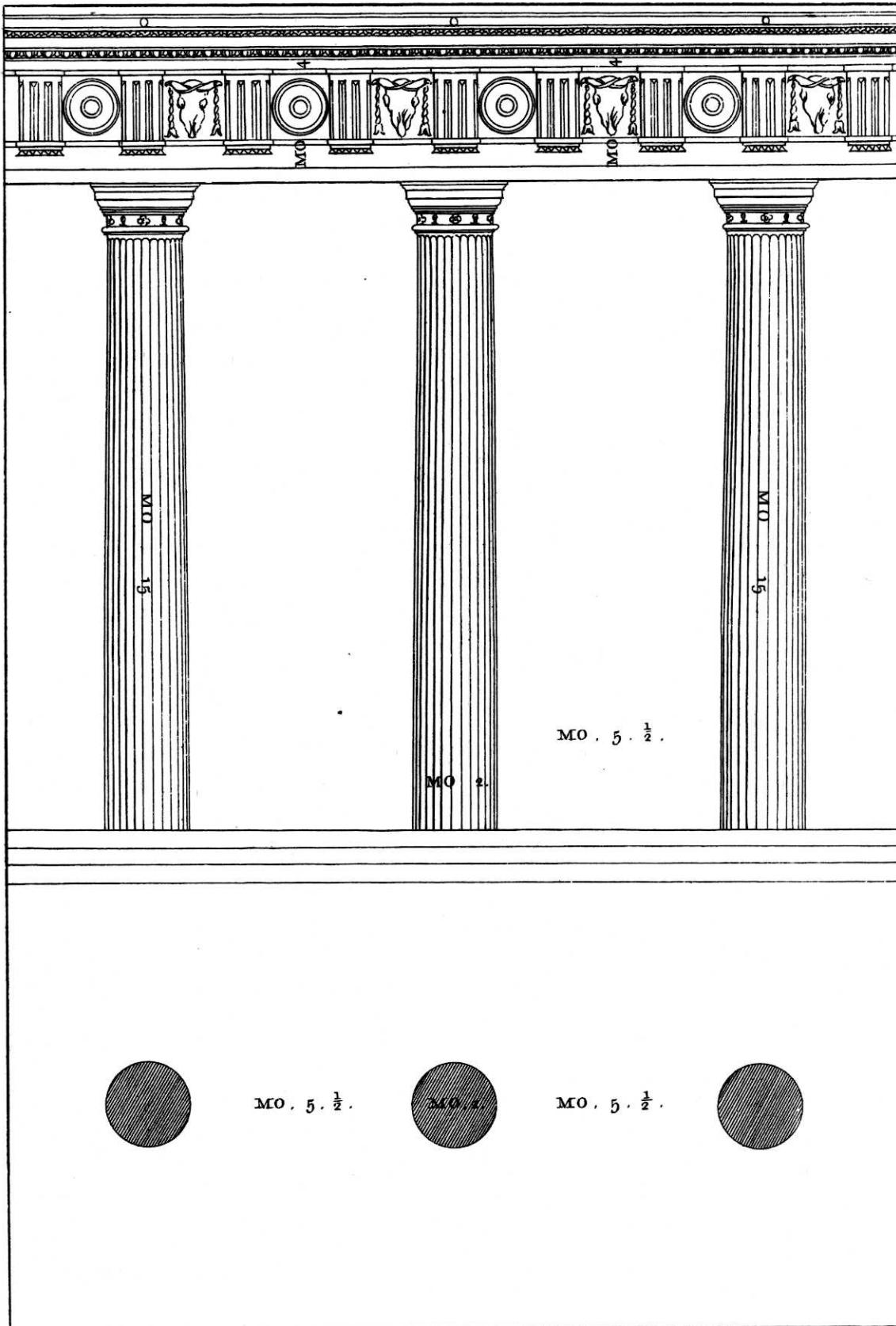
T H E antients sometimes made them as thick as the whole void, as those are in that part of the theatre of *Verona* which is not upon the Mountain. But in private buildings they must not be less in thickness than the third part of the void, nor more than the two thirds, and ought to be square. But to lessen the expence, and to make the place to walk in larger, they may be made less thick in the flank than front, to adorn which, half columns and pilasters may be placed in the middle, to support the cornice over the arches of the loggia's, whose thickness must be proportionable to their height, according to each order; as may be seen in the following chapters and designs.

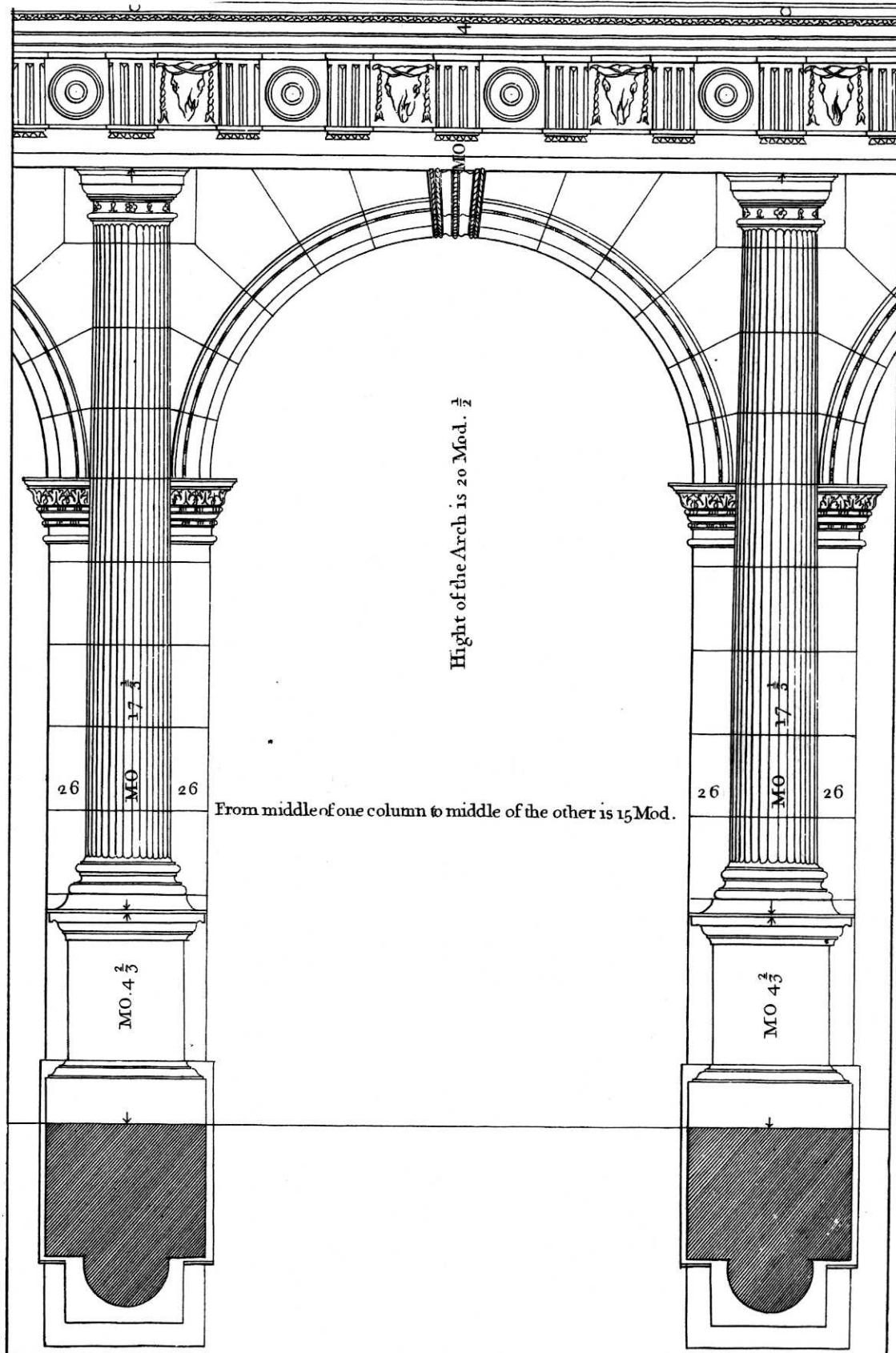
F O R the better understanding of which, and to avoid my repeating the same thing often, it is to be observed, that in the dividing and measuring the said orders, I would not make use of any certain and determinate measure peculiar to any city, as a cubit, foot, or palm, knowing that these several measures differ as much as the cities and countries; but imitating VITRUVIUS, who divides the Dorick order with a measure taken from the thickness or diameter of the columns, common to all, and by him called a module, I shall therefore make use of the same measure in all the orders.

T H E module shall be the diameter of the column at bottom, divided into sixty minutes; except in the Dorick Order, where the module is but half the diameter of the column, divided into thirty minutes, because it is thus more commodious in the divisions of the said order.

F R O M whence every one may, by either making the module greater or less, according to the quality of the building, make use of the proportions and profiles belonging to each order.







floors even, and in such a manner that the thresholds of the doors be not higher than the remaining part of the chamber-floor; and if any little room or closet should not join with its height to that mark, a *mezato* or false floor ought to be made upon it.

THE cielings are also diversly made, because many take delight to have them of beautiful and well-wrought beams. Where it is necessary to observe, that these beams ought to be distant one from another one thickness and a half of the beam, because the cielings appear thus very beautiful to the eye, and there remains so much of the wall between the ends of the beams, that it is more able to sustain what is over it. But if they are made more distant, they'll not be an agreeable sight; and if they are made less, it will be in a manner dividing the wall above from that below, whereupon, the beams being rotted or burnt, the upper wall must be ruined.

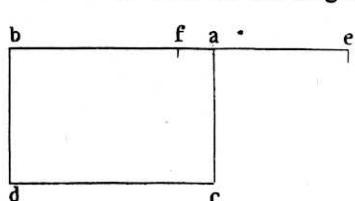
OTHERS are for having compartments of *stucco*, or of wood, in which pictures are placed; and thus being adorn'd according to different inventions, therefore in this no certain and determinate rule can be given.

C H A P. XXIII.

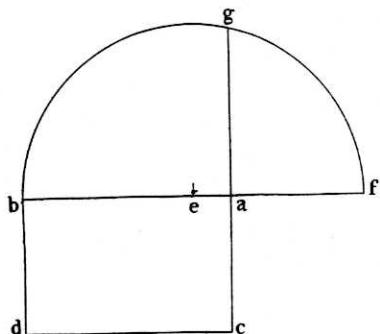
Of the height of the rooms.

THE rooms are either made with a vaulted or flat cieling. If with a flat cieling, the height from the floor to the cieling must be equal to their breadth; and the rooms above must be a sixth part less in height than those below. If vaulted (as those of the first order are usually made, because they thus appear more beautiful, and are less exposed to fires) the height of the vaults in rooms that are square is a third part more than the breadth of the room.

BUT in those which are longer than they are broad, it will be necessary from the length and breadth to seek for the height, that they may bear a proportion to each other. This



make eighteen, the half of which is nine, the vault ought therefore to be nine foot high.



A NOTHER height, that will be proportionable both to the length and breadth of the room, will also in this manner be found. cb , the place to be vaulted, being set down, we'll add the breadth to the length, and make the line $b f$; we'll afterwards divide it into two equal parts in the point e , which being made the centre, we'll make the half circle $b g f$, and lengthen $a c$ until it touches the circumference in the point g , and ag will give the height of the vault of cb .

By numbers it will thus be found: The length and breadth of the room in feet being known, we'll find a number that has the same proportion to the breadth as the length has to the number sought. This we find by multiplying the lesser extreme with the greater;

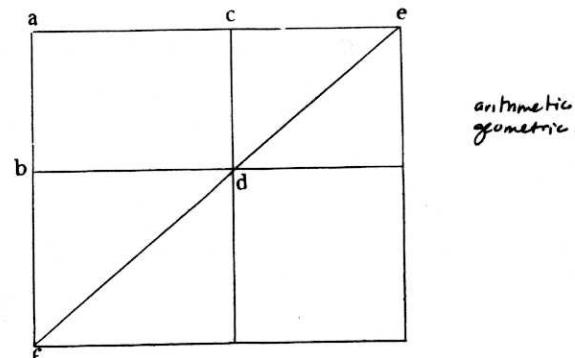
because the square root of the number which will proceed from the said multiplication, will be the height we seek. As for example, if the place that we intend to vault be nine foot long, and four wide, the height of the vault will be six foot; and the same proportion that nine has to six, six also has to four, that is the *fesquialteral*.

$$\begin{array}{c} a \\ \square \\ b \end{array} \quad \frac{a}{b} = \frac{x}{\sqrt{ab}}$$

BUT

BUT it is to be observed, that it will not be possible always to find this height in whole numbers.

ANOTHER height may be found that will fall short of this, but nevertheless will be proportionable to the room. Draw the lines ab , ac , cd , and bd , that describe the breadth and length of the room, and the height will be found as in the first method, which is ce , this join to ac , then draw the line edf , and lengthen ab until it touches edf in the point f , and bf will be the height of the vault.



THIS may likewise be done with numbers. The height being found, from the length and breadth of the room, according to the first method (which in a foregoing example was nine) the length, breadth and height must be placed as they are in the figure ; then nine is to be multiplied with twelve and with six, and that which will proceed from twelve is to be placed under the twelve, and the product of six under the fix ; afterwards the fix is to be multiplied with twelve, and the product, which is forty two, placed under the nine ; then a number being found which multiplied by nine amounts to forty two, which in our case would be eight, we'll say eight foot to be the height of the vault.

$$\begin{array}{r} 12 - 9 - 6 \\ 108 - 72 - 54 \\ \quad\quad\quad 8 \end{array}$$

THESE heights run in this manner between themselves, viz. the first is greater than the second, and the second is greater than the third ; we'll however make use of each of these heights, according as they may suit with convenience, that several rooms of different dimensions may be so made as to have all their vaults of an equal height, and the said vaults to be nevertheless proportionable to them ; from which will result both beauty to the eye, and convenience for the floors that are placed thereon, since they'll all be level.

THERE are also other heights for vaults, which do not come under any rule, and are therefore left for the architect to make use of as necessity requires, and according to his own judgment.

C H A P. XXIV.

Of the several manners of vaults.

THERE are six manners of vaults, viz. cross'd, fasciated, flat (so they call vaults which are a portion of a circle, and do not arrive to a semicircle) circular, groined, and shell-like ; all which are a third part of the breadth of the room in height.

THE two last manners have been invented by the moderns, but the four first were used by the antients.

THE circular vaults are made in square rooms, and the manner of making them is thus : In the angles of the room are left some mutules that support the semicircle of the vault, which in the middle is flat, but more circular the nearer it comes to the angles.

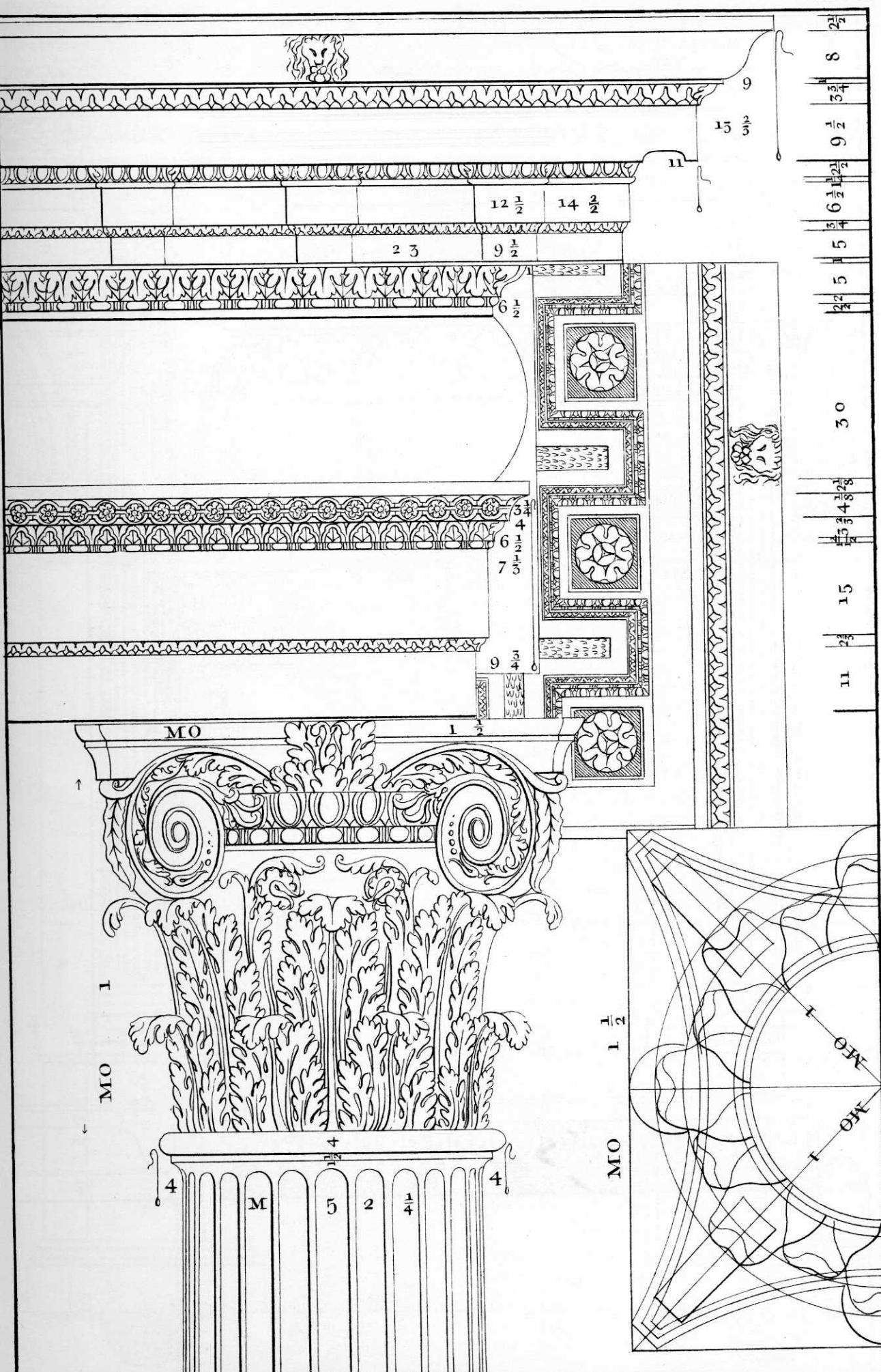
THERE is one of this kind in the baths of *Titus* at *Rome*, which was partly ruin'd when I saw it.

modern

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I

I HAVE



THE SECOND BOOK
O F
Andrea Palladio's
ARCHITECTURE.

CHAPTER I.

Of the decorum or conveniency that ought to be observed in private fabrics.

I HAVE explained in the foregoing book all those things, that to me seemed most worthy of consideration for the building of public edifices, and private houses, that the work might be beautiful, graceful and durable: I have there also mentioned some things belonging to the conveniency of private houses, to which this other book shall chiefly be applied: for that house only ought to be called convenient, which is suitable to the quality of him that is to dwell in it, and whose parts correspond to the whole and to each other.

BUT the architect ought above all to observe, that (as VITRUVIUS says in the first and sixth book) for great men, and particularly those in a republic, the houses are required with loggia's and spacious halls adorned, that in such places those may be amused with pleasure, who shall wait for the master to salute, or ask him some favour: and for gentlemen of a meaner station, the fabrics ought also to be less, of less expence, and have fewer ornaments. For judges and advocates, they ought likewise to be so built, that in their houses there may be handsome and well adorned places to walk in, that their clients may remain there without inconvenience.

MERCHANTS houses ought to have places facing the north, where their merchandizes may be lodged; and to be so disposed, that the master may not be in fear of thieves.

DECORUM is also to be observed in regard to the work, if the parts so answer to the whole, as that in great edifices there may be great members, in the little, small, and middling in the middle-sized: for what a disagreeable and unseemly thing wou'd it be, if in a very large fabric there should be small halls and rooms; and, on the contrary, in a little one, there should be two or three rooms that took up the whole.

As much as possible, one ought therefore, as has been said, to have a regard to those who are inclined to build; and not so much to mind what they can afford to lay out as the quality of the building that is proper for them: when that is settled, the parts are to be so disposed, that they may be suitable to the whole, and to each other, and such ornaments are to be applied as shall seem most proper. But an architect is very often obliged, to conform more to the will of those who are at the expence, than to that which ought to be observed.

Of the compartment or disposition of rooms, and of other places.

Wt means diagram.

THAT the houses may be commodious for the use of the family, without which they wou'd be greatly blame-worthy, far from being commendable, great care ought to be taken, not only in the principal parts, as the loggia, halls, courts, magnificent rooms, and ample stairs, light and easy of ascent; but also, that the most minute and least beautiful parts be accommodated to the service of the greatest and more worthy: for as in the human body there are some noble and beautiful parts, and some rather ignoble and disagreeable, and yet we see that those stand in very great need of these, and without them they cou'd not subsist; so in fabrics, there ought to be some parts considerable and honoured, and some less elegant; without which the other cou'd not remain free, and so consequently wou'd lose part of their dignity and beauty. But as our Blessed Creator has ordered these our members in such a manner, that the most beautiful are in places most expos'd to view, and the less comely more hidden; so in building also, we ought to put the principal and considerable parts, in places the most seen, and the less beautiful, in places as much hidden from the eye as possible; that in them may be lodged all the foulness of the house, and all those things that may give any obstruction, and in any measure render the more beautiful parts disagreeable. I approve therefore that in the lowest part of the fabric, which I make somewhat underground, may be disposed the cellars, the magazines for wood, pantries, kitchens, servants-halls, wash-houses, ovens, and such like things necessary for daily use. From which disposition follow two conveniences, the one, that the upper part remains all free; and the other and no less important, is, that the said upper apartments are wholesomer to live in, the floor being at a distance from the damps of the ground; besides as it rises, it is more agreeable to be looked at, and to look out of. It is also to be observed, that in the remaining part of the fabric there may be great, middle-sized, and small rooms, and all near one another, that they may reciprocally be made use of.

THE small rooms may be divided off, to make closets where studies or libraries may be placed, riding accoutrements and other lumber, which may be every day wanted, and which wou'd not be so proper to be in rooms, where one either sleeps, eats, or where strangers are received.

WHAT contributes also to conveniency is, that the rooms for summer be ample, spacious and turned to the north; and those for the winter to the south and west, and rather small than otherwise: because we seek the shades and winds in summer, and in winter the sun; besides small rooms are much more easily warmed than large.

BUT those which we wou'd make use of in spring and autumn, must be turned to the east, and ought to look over greens and gardens. In this particular part, studies and libraries ought also to be; because the morning is the most proper time of all other to make use of them.

BUT the large rooms with the middling, and those with the small, ought to be so distributed, that, as I have elsewhere said, one part of the fabric may correspond with the other; and that so the body of the edifice, may have in itself a certain convenience in its members, that may render the whole beautiful and graceful.

BUT as most commonly in cities, either the neighbours walls, the streets, or publick places, prescribe certain limits, which the architect cannot surpass, it is proper he shou'd conform himself to the circumstances of the situation; to which, if I mistake not, the following plans and elevations will give a great insight, and which may also serve as an example of what has been said in the foregoing book.

C H A P. III.

Of the designs of town-houses.

I AM convinced, that in the opinion of those, who shall see the following fabrics, and know how difficult it is to introduce a new *custom*, especially in building, of which profession every one is persuaded that he knows his part, I shall be esteemed very fortunate, to have found gentlemen of so noble and generous a disposition, and of such excellent judgment, as to have hearkened to my reasons, and departed from that antiquated custom of building without grace or any beauty at all; and, indeed, I cannot but very heartily thank God, as we ought in all our actions to do, for granting me such a share of his favour, as to have been able to put in practice many of those things, which I have learnt from my very great fatigues and voyages, and by my great study.

*custom
new custom*

AND altho' some of the designed fabrics are not entirely finished, yet may one by what is done comprehend what the whole will be when finished. I have prefixed to each the name of the builder, and the place where they are, that every one may, if he pleases, really see how they succeed.

AND here the reader may take notice, that in placing the said designs, I have had respect neither to the rank or dignity of the gentlemen to be mentioned; but I have inserted them where I thought most convenient: not but they are all very honourable.

LET us now come to the fabrics, of which the following is in *Udene* the metropolis Plate 1. of *Friuli*, and was raised from the foundation by Signor FLORIANO ANTONINI, a gentleman of that city. The first order of the front is of rustic work, the columns of the front, of the entrance, and of the loggia backwards are of the Ionick order. The first rooms are vaulted; the greater have the height of the vaults according to the first method before-mentioned, for the height of vaults in places that are longer than they are broad. The rooms above have flat ceilings, and so much wider than those below, as the contraction or diminution of the walls, and the height of the ceilings, equal to their breadth. Over these are other rooms which may serve for granaries. The height of the hall reaches to the roof. The kitchen is out of the house, but very commodious nevertheless. The necessary places are on the sides of the stairs, and although they are in the body of the fabric, they do not give any offensive smell; because they are placed in a part remote from the sun, and have vents from the bottom of the pit all through the thickness of the wall, to the very summit of the house.



THIS line is half the *Vicentine* foot, with which the following fabrics have been measured.

THE whole foot is divided into twelve inches, and each inch into four minutes.

IN *Vicenza* upon the *Piazza*, which is vulgarly called the *Jöla*, the Count VALERIO CHIERICATO, an honourable gentleman of that city, has built according to the following Plate 2. invention.

THIS fabric has in the part below a loggia forwards, that takes in the whole front: the pavement of the first order rises above ground five foot; which has been done not only to put the cellars and other places underneath, that belong to the convenience of the house, which wou'd not have succeeded if they had been made intirely under ground, because the river is not far from it; but also that the order above might the better enjoy the beautiful situation forwards. The larger have rooms the height of their vaults, according to the first method for the height of vaults: the middle-sized are with groined vaults, and their vaults as high as those of the larger. The small rooms are also vaulted, and are divided off. All these vaults

vaults are adorned with most excellent compartments of stucco, by Messer BARTOLOMEO RIDOLFI, a Veronese sculptor; and paintings by Messer DOMENICO RIZZO, and Messer BATTISTA VENETIANO, men singular in this profession. The hall is above in the middle of the front, and takes up the middle part of the loggia below. Its height is up to the roof; and because it projects forward a little, it has under the angles double columns. From one part to the other of this hall, there are two loggia's, that is, on each side one; which have their soffites or ceilings adorned with very beautiful pictures, and afford a most agreeable sight. The first order of the front is Dorick, and the second Ionick.

Plate 3. HERE follows the design of part of the front in a large form.

Plate 4. THE following designs are of the house of the Count ISEPO DE PORTI, a very noble family of the said city. This house fronts two publick streets, and therefore has two entrances, which have four columns each, that support the vault, and render the place above it secure. The first rooms are vaulted. The height of those, that are on each side the said entrances, is according to the last method for the height of vaults. The second rooms, that is, of the second order, are with flat cielings: and thus the first, as well as the second of that part of the fabrick, which has been done, are adorned with paintings, and most beautiful stucco's, by the hands of the aforesaid excellent artists, and of Messer PAOLO VERONESE, a most excellent painter. The court encompassed with portico's, to which one goes from the said entrances by a passage, is to have columns six and thirty foot and an half high, that is, as high as the first and second order. Behind these columns there are pilasters one foot and three quarters broad, and one foot and two inches thick, which support the pavement of the loggia above. This court divides the whole house into two parts: that forwards is for the use of the master, and the women belonging to him; and that backward to lodge strangers in; whereby those of the house, and the strangers will remain free in every respect: to which the ancients, and especially the Greeks, had a very great regard.

BESIDES which, this partition will also serve in case the descendants of the said gentleman, shou'd chuse to have their apartments separate.

I HAVE placed the principal stairs under the portico, that they may answer to the middle of the court; that those who have a mind to go up, may as it were be compelled to see the most beautiful part of the fabrick; and also, that being in the middle, they may serve one part as well as the other. The cellars and such-like places are under ground. The stables are out of the square of the house, and have their entrance under the stairs. Of the designs in

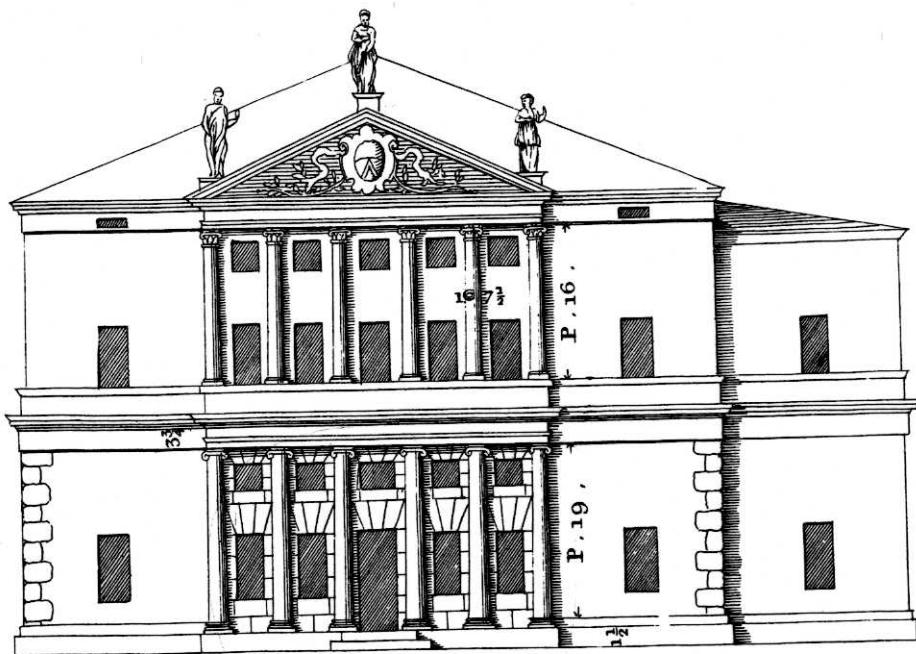
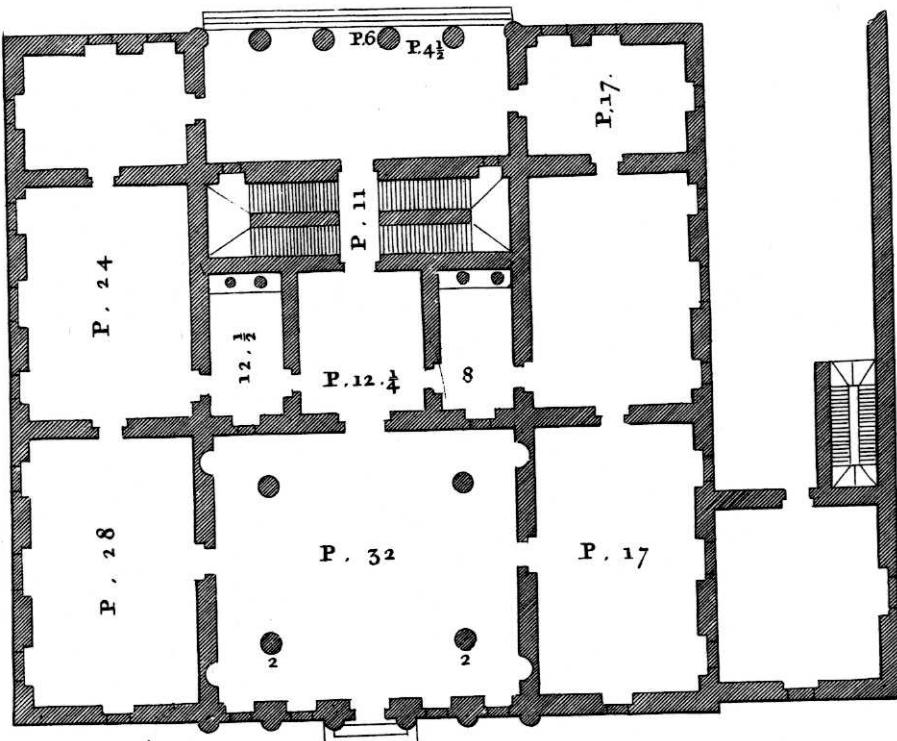
Plate 5,6. a large form, the first is of part of the front, and the second of the part towards the court.

Plate 7. THE following fabrick is in *Verona*, and was begun by the Count GIOVANNI BATTISTA DELLA TORRE, a gentleman of that city, who being overtaken by death, could not finish it; but there is a great part of it done. One goes into this house by the flanks, where the passages are ten feet wide; from which one comes into the courts, each fifty feet long; and from these into an open hall, which has four columns for the greater security of the vault above. From this hall one goes to the stairs, which are oval, and open in the middle. The said courts have corridors or balconies round them, level with the floor of the second rooms. The other stairs serve for the greater conveniency of the whole house. This compartment succeeds extremely well in this situation; which is long and narrow, and has the principal street towards one of the lesser fronts.

Plate 8. THE following designs are of a fabrick in *Vicenza*, of the Count OTTAVIO DE THIENI: It belonged to Count MARC' ANTONIO, who began it. This house is situated in the middle of the city, near the piazza, and therefore I have thought proper to dispose of that part towards the piazza into ~~shops~~; because the architect is also to consider the advantage of the builder, when it can be done conveniently, and where the situation is sufficiently large. Every shop has over it a mezato for the use of the shop-keeper; and over them are the rooms for the master.

THIS house is insular, that is, encompassed by four streets. The principal entrance, or as one may say, the master-gate, has a loggia forwards, and fronts the most frequented street of the city. The great hall is to be above; which will project even with the loggia. There are

two



two entrances in the wings, which have columns in the middle, placed there not so much for ornament, as they are to render the part above it secure, and to make the height proportionable to the breadth. From these entrances one goes into the court encompassed all round with loggia's of pilasters. In the first order they are Rustick, and in the second of the Composite order. In the angles, there are octangular rooms, that succeed well, as well with respect to their form, as for diverse uses to which they may be accommodated. The rooms of this fabrick that are now finished, have been adorned with the most beautiful stucco's, by Messer ALESSANDRO VITTORIA, and Messer BARTOLOMEO RIDOLFI; and with paintings, by Messer ANSELMO CANERA, and Messer BERNARDINO INDIA of Verona, not inferior to any of the present age. The cellars, and such like places, are under ground; because this fabrick is in the highest part of the city, where there is no danger that water should prove any inconvenience.

OF the following designs, in a larger form of the above inserted fabrick; the first is part Plate 9.
of the front; the second is of the part towards the court. Plate 10.

THE Counts VALMARANA, very honourable gentlemen, for their own honour and convenience, and the ornament of their native country, have built in the said city, according to the following designs: in which fabrick there is no want of any ornaments that can be thought of; as stucco's and paintings. This house is divided into two parts by the middle court; about which there is a corridor, or balcony, which leads from the fore-part to that which is backwards. The first rooms are vaulted; the second with flat ceilings, and they are as high as they are broad. The garden, which is before one comes to the stables, is much larger than it is marked; but it has been made so small because the leaf wou'd not have contained the stables and all the other parts. Thus much as to this fabrick, having in this, as well as in all the others, inserted the measure of each part.

THE following design is of half the front.

Plate 12.

AMONGST many honourable *Vicentine* gentlemen, there is Monsignor PAOLO ALMERICO, an ecclesiastick, and who was referendary to two supreme Popes, Pio the fourth and fifth, and who for his merit, deserved to be made a *Roman* citizen with all his family. This gentleman after having travelled many years out of a desire of honour, all his relations being dead, came to his native country, and for his recreation retired to one of his country-houses upon a hill, less than a quarter of a mile distant from the city, where he has built according to the following invention: which I have not thought proper to place amongst the fabricks of villa's, because of the proximity it has with the city, whence it may be said to be in the very city. The site is as pleasant and as delightful as can be found; because it is upon a small hill, of very easy access, and is watered on one side by the *Bacchiglione*, a navigable river; and on the other it is encompassed with most pleasant risings, which look like a very great theatre, and are all cultivated, and abound with most excellent fruits, and most exquisite vines: and therefore, as it enjoys from every part most beautiful views, some of which are limited, some more extended, and others that terminate with the horizon; there are loggia's made in all the four fronts; under the floor of which, and of the hall, are the rooms for the convenience and use of the family. The hall is in the middle, is round, and receives its light from above. The small rooms are divided off. Over the great rooms (the vaults of which are according to the first method) there is a place to walk round the hall, fifteen foot and a half wide. In the extremity of the pedestals, that form a support to the stairs of the loggia's, there are statues made by the hands of Messer LORENZO VICENTINO, a very excellent sculptor.

Signor GIULIO CAPRA, likewise a most noble cavalier, and a *Vicentine* gentleman, for an ornament to his native country, rather than from any necessity he was under of so doing, has prepared the materials to build, and has begun according to the following designs, in a most beautiful site, in the principal street of the city. This house will have courts, loggia's, halls and rooms; some of which will be great, some middling, and others small. The form will be beautiful, and diversified; and certainly that gentleman will have a very stately and magnificent house, suitable to his noble mind.

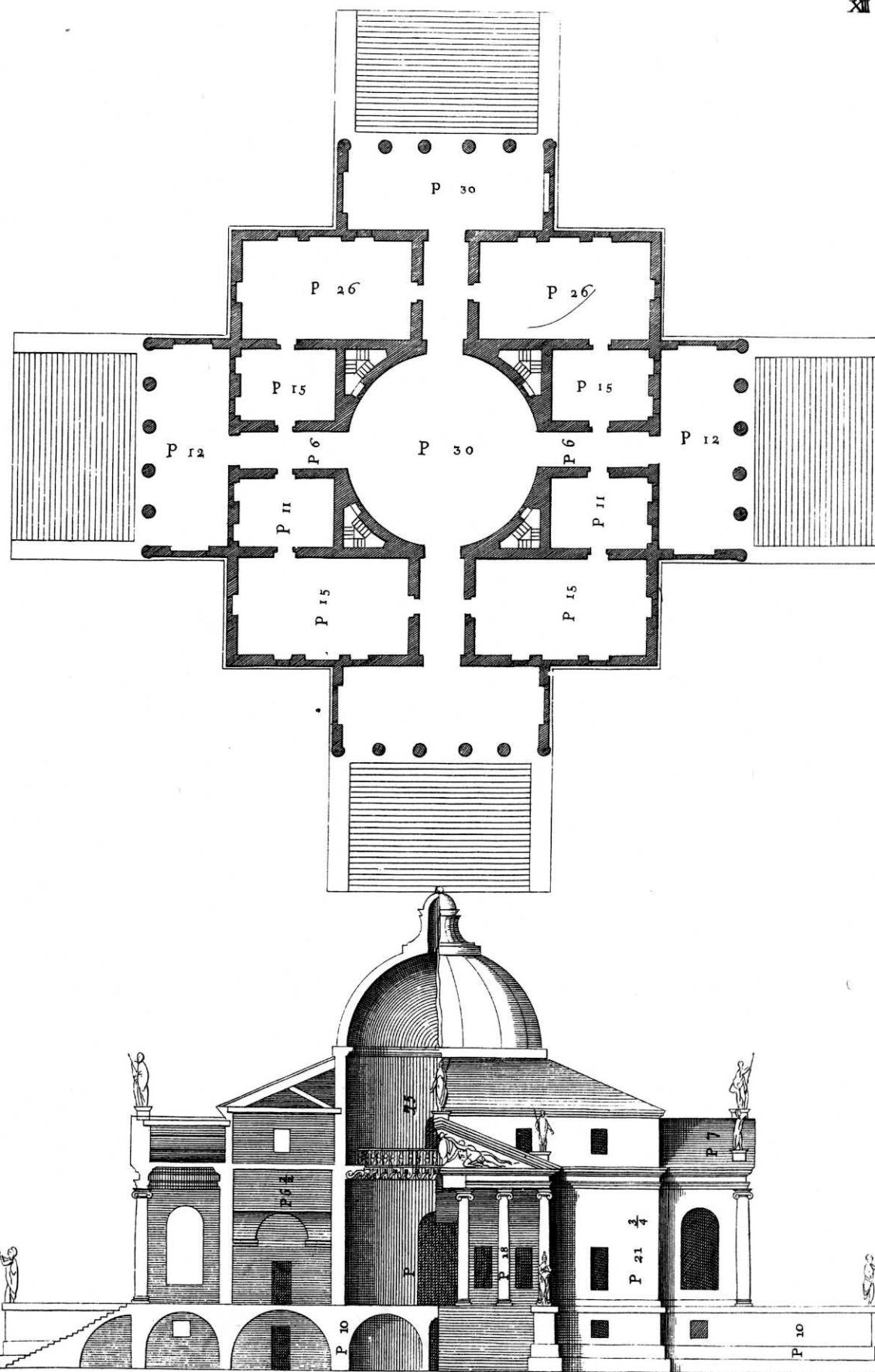
C, an open court.

D, a court likewise uncovered.

L, the court.

S, the hall which in the lower part has columns, and free above, that is, without columns.

I MADE the present invention for a site, belonging to the Count MONTANO BARBARANO at Plate 15.
Vicenza; in which, by reason of the situation, I did not observe the same order on one part, as
M I did



C H A P. XII.

Of the SITE to be chosen for the fabricks of VILLA'S.

THE city houses are certainly of great splendour and conveniency to a gentleman who is to reside in them all the time he shall require for the administration of the republick, or for directing his own affairs. But perhaps he will not reap much less utility and consolation from the country house; where the remaining part of the time will be passed in seeing and adorning his own possessions, and by industry, and the art of agriculture, improving his estate; where also by the exercise which in a villa is commonly taken, on foot and on horseback, the body will the more easily preserve its strength and health; and, finally, where the mind, fatigued by the agitations of the city, will be greatly restor'd and comforted, and be able quietly to attend the studies of letters, and contemplation.

HENCE it was the antient sages commonly used to retire to such like places; where being oftentimes visited by their virtuous friends and relations, having houses, gardens, fountains, and such like pleasent places, and above all, their virtue, they could easily attain to as much happiness as can be attained here below.

HAVING now, by the help of God, gone through what I had to say concerning city houses; it is just that we proceed to those of the country, in which private and family affairs are chiefly transacted.

BUT before we come to the designs of these, it seems not improper to say something concerning the situation or place to be chosen for those fabricks, and of their disposition; because, as we are not confined (as commonly happens in cities) by publick walls, or those of our neighbours, to certain and determinate bounds, it is the busines of a wise architect, with the utmost care and diligence, to seek and find out a convenient and healthy place: since we are, for the most part, in the country during the summer season; at which time, even in the most healthy places, our bodies become weak and sickly, by reason of the heat.

IN the first place therefore, let a place be chosen as convenient as possible, and in the middle of the estate, that the owner, without much trouble, may view and improve it on every side, and that the fruits thereof may be the more conveniently carried by the labourers to his house.

IF one may build upon a river, it will be both convenient and beautiful; because at all times, and with little expence, the products may be convey'd to the city in boats, and will serve for the uses of the house and cattle. Besides the cooling the air in summer very much, it will afford a beautiful prospect, with which the estates, pleasure and kitchen gardens may with great utility and ornament be water'd, which are the sole and chief recreation of a villa.

BUT if navigable rivers cannot be had, one must endeavour to build near some other running water; and above all to get at a distance from standing waters, because they generate a very bad air: which we may very easily avoid, if we build upon elevated and cheerful places, where the air is, by the continual blowing of the winds, moved; and the earth, by its declivity, purged of all ill vapours and moisture: and where the inhabitants are healthy and cheerful, and preserve a good colour, and are not molested by gnats and other small animals, which are generated by the putrefaction of still fenny waters.

AND because the waters are very necessary to human life, and according to their various qualities they produce in us different effects; some generating the spleen, others glandulous swellings in the neck, others the stone, and many other diseases:

GREAT care ought therefore to be taken, not to build near those waters which have any odd taste, or which partake of any colour; but be clear, limpid, and subtile, and which, being sprinkled upon a white cloth, do not stain it: because these will be certain signs of their goodness.

THERE are many methods to find whether the waters are good, taught us by VITRUVIUS: but that water is deemed perfect which makes good bread, and in which greens are quickly boiled, and which also will not stain a white cloth.

IT will be an excellent sign of the goodness of the water, if, where it passes, one does not see moss or rushes grow; but the place is clean, beautiful, and has sand or gravel at the bottom, and is not foul and muddy.

THE animals which are accustomed to drink of them, will also be an indication of the goodness and salubrity of the waters, if they are lively, robust, and fat, and not weak and lean.

BUT with regard to the wholesomeness of the air, besides the aforesaid particulars, the antient edifices will give an indication thereof, if they are not corroded and spoiled: if the trees are well nourished and beautiful, and not bent in any part by the winds, and if they are not such as grow in fenny places.

AND if the stones produced in those places do not appear on the surface to be putrified, and also if the colour of the inhabitants be natural, and shews a good temperature.

ONE ought not to build in valleys enclosed between mountains; because edifices in valleys are there hid, and are deprived of seeing at a distance, and of being seen. These are without dignity and grandure, and also entirely contrary to health; because the earth being impregnated by the rains that settle there, sends forth pestiferous vapours, infecting both the body and mind; the spirits being by them weaken'd, the joints and nerves emasculated: and what is lodged in the granaries will corrupt through the too great moisture.

BESIDES which, if the sun happens to shine, the reflection of its rays will cause excessive heats; and if it doth not, the continual shade will render the people in a manner stupid and discoloured.

AND when the winds enter into the said valleys, it will be with too much fury, as if it were through narrow channels; and when they do not blow, the collected air will grow gross and unhealthy.

WHEN there is a necessity of building upon a mountain, let a situation be chosen facing a temperate part of the heaven, and which is not by higher mountains continually shaded, nor scorched (as it were by two suns) by the sun's reverberation from some neighbouring rock, for in either of these cases it will be exceeding bad to dwell in.

AND, finally, in the choice of the situation for the building a villa, all those considerations ought to be had, which are necessary in a city house; since the city is as it were but a great house, and, on the contrary, a country house is a little city.

C H A P. XIII.

Of the compartment or disposition of the V I L L A' S.

THE agreeable, pleasant, commodious, and healthy situation being found, attention is to be given to its elegant and convenient disposition. There are two sorts of fabricks required in a villa: one for the habitation of the master, and of his family; and the other to manage and take care of the produce and animals of the villa. Therefore the compartment of the site ought to be in such a manner, that the one may not be any impediment to the other.

THE habitation for the master ought to be made with a just regard to his family and condition, and as has been observed in cities, of which mention has been made.

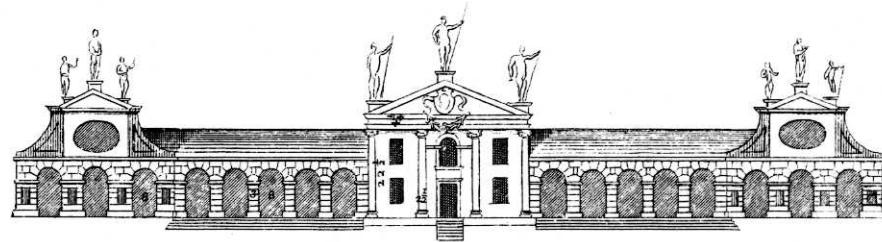
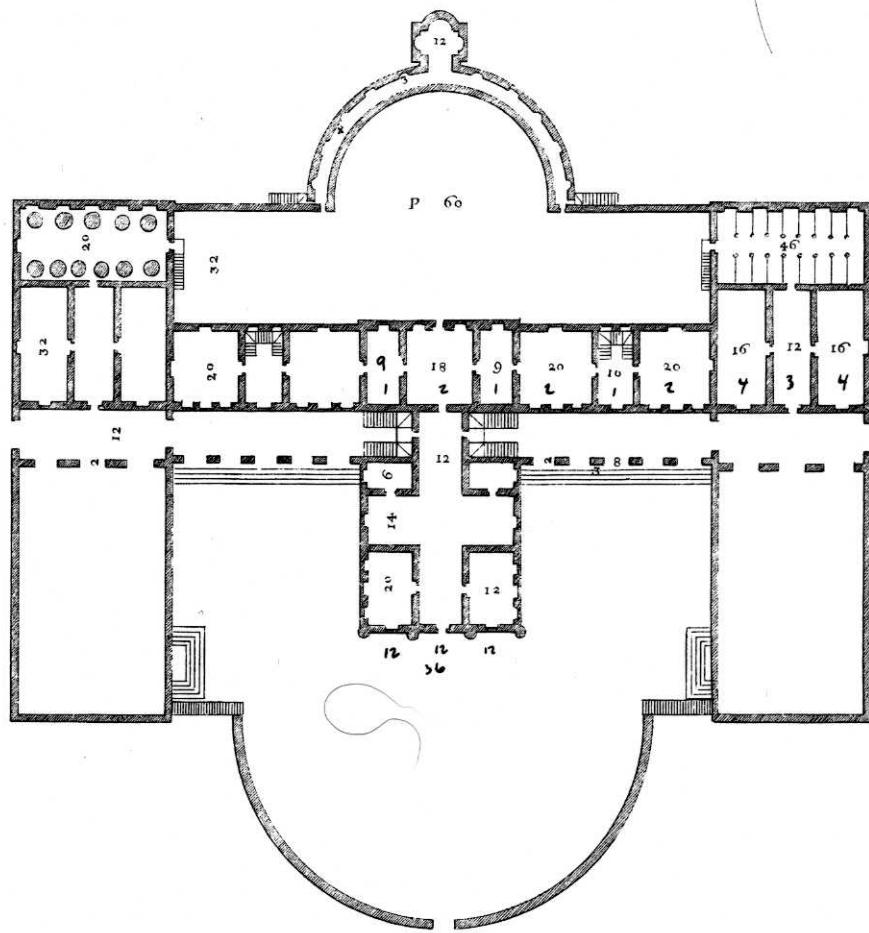
THE covertures for the things belonging to a villa, must be made suitable to the estate and number of animals; and in such manner joined to the master's habitation, that he may be able to go to every place under cover, that neither the rains, nor the scorching sun of the summer, may be a nuisance to him, when he goes to look after his affairs; which will also be of great use to lay wood in under cover, and an infinite number of things belonging to a villa, that would otherwise be spoiled by the rains and the sun: besides which these portico's will be a great ornament.

mil. mi
time time

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9, 12, 10
3, 4 2, 3
fourth fifth

XXXIV.



are there to be seen, one may comprehend, that in the time of the *Romans*, it was also held by the antients in no small esteem.

THE part of this house which serves for the use of the master, and of the family, has a court, round which are portico's. The columns are of the Ionick order, made of unpolished stones; as it should seem a villa requires, to which plain and simple things are more suitable than those that are delicate. These columns support the outward cornice, that forms a gutter; into which the water falls from the roof. Behind these columns, that is, under the portico's, there are pilasters which support the pavement of the loggia above, that is, of the second floor. In this second floor there are two halls, the one opposite to the other; the largeness of which is expressed in the design of the plan, with lines that intersect one another, and are drawn from the outward walls of the fabrick to the columns. On the side of this court is that for the use of the villa; on the one and on the other part of which, there are covertures for those conveniences that are required in villa's.

THE following fabrick belongs to Signor Conte ANIBALE SAREGO, at a place in the Plate 50, *Colognese*, called *la Miga*. A pedestal, four foot and a half high, forms a basement to the whole fabrick; and at this height is the pavement of the first rooms; under which there are the cellars, the kitchens, and other rooms for the use of the family. The said first rooms are vaulted, and the second cieled. Near this fabrick there is the court for the necessaries of a villa, with all those places that are suitable to such a use.

C H A P. XVI.

Of the VILLA's of the antients.

I HAVE hitherto put the designs of many fabricks, for villa's done by my direction. It remains that I shou'd also put the design of a house for a villa, which, as VITRUVIUS says, the antients used to make; because all the places belonging to the habitation, and to the uses of the villa, may be seen in it exposed to that region of the heaven which is suitable for them. Nor shall I expatiate in referring to what PLINY says upon this subject; because my chief intent at this time, is only to shew how VITRUVIUS ought to be understood in this place. The principal front is turned to the south, and has a loggia, from which one goes into the Plate 51. kitchen through a passage, which receives its light from above the places adjacent, and has the chimney in the middle. On the lefthand there are the stables for oxen, whose mangers are turned to the fire, and to the east. The baths are also on the same part, which, for the rooms that these require, are at a distance from the kitchen, even with the loggia. On the right hand is the press, and other places for the oil, answerable to the places for the baths, and front the east, south, and west. Backwards there are the cellars, which receive their light from the north, and are far from noise, and from the heat of the sun. Over the cellars are the granaries, which receive their light from the same part of the heaven. On the right and left part of the court, there are the stables for horses, sheep, and other animals; the hay-lofts, the places for straw, and the bake-houses; all which ought to be far from the fire. Backwards one sees the master's habitation, the principal front of which is opposite to the front of the house for the uses of the villa: so that in these houses, built out of the city, the atrio's were in the back part. In this are observed all those considerations of which mention has been made before, when the design of the antient private house was given; and therefore we have now only considered what regards the villa.

I HAVE made the frontispiece in the fore-front in all the fabricks for villa's, and also in some for the city, in which are the principal gates; because such frontispieces shew the entrance of the house, and add very much to the grandeur and magnificence of the work. Besides, the fore-part being thus made more eminent than the rest, is very commodious for placing the ensigns or arms of the owners, which are commonly put in the middle of the front. The antients also made use of them in their fabricks, as is seen in the remains of the temples, and other publick edifices; from which, as I have said in the preface to the first book, it is very likely that they took the invention, and the reasons for private edifices or houses. VITRUVIUS, in the last chapter of his third book, teaches how they are to be made.

expl
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how

