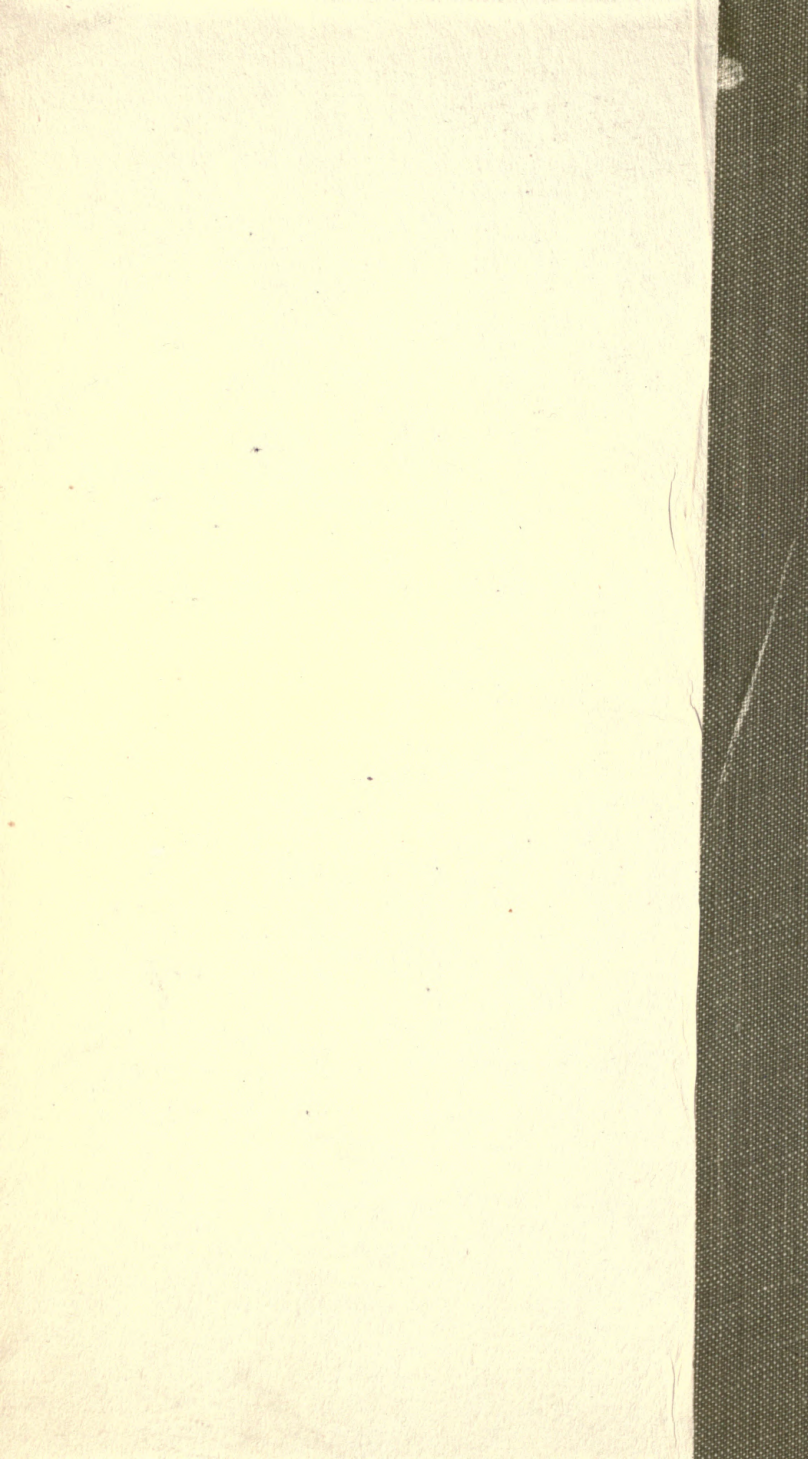


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THE LIVES
OF
CELEBRATED ARCHITECTS,
ANCIENT AND MODERN.



THE FIFTEEN
OF
CELEBRATED ARCHITECTS

LONDON: PRINTED BY J. MOYES, BOUVERIE STREET.



THE LIVES
OF
CELEBRATED ARCHITECTS,
ANCIENT AND MODERN:

WITH
HISTORICAL AND CRITICAL OBSERVATIONS ON THEIR
WORKS, AND ON THE PRINCIPLES OF THE ART.

BY
FRANCESCO MILIZIA.

Translated from the Italian
BY MRS. EDWARD CRESY.

WITH NOTES AND ADDITIONAL LIVES.

IN TWO VOLUMES.

VOL. I.

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5/8/08

LONDON:
PRINTED FOR J. TAYLOR, ARCHITECTURAL LIBRARY,
HIGH HOLBORN.
1826.



THE LIVES

OF

JOHN JOHNSON
COLLEBRATED ARCHITECT

ANCIENT AND MODERN

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LONDON:

PRINTED FOR A. NEAL, ARCHITECTURAL LIBRARY

1850

TO

JOHN SOANE, Esq.

F.R.S. F.S.A.

ARCHITECT TO THE BANK OF ENGLAND,

MEMBER OF THE ACADEMIES OF PARMA AND FLORENCE,

PROFESSOR OF ARCHITECTURE IN THE ROYAL
ACADEMY,

AND ONE OF HIS MAJESTY'S ARCHITECTS ATTACHED TO

THE BOARD OF WORKS, &c. &c.

Sir,

The kind manner in which you have allowed me to place under your protection this Translation of the celebrated Work "Memorie degli Architetti Antichi e Moderni de Francesco Milizia," claims my grateful acknowledgment: no one can be better qualified to judge of its historical and scientific importance than yourself; in evidence of which, I need

only refer to your extensive and invaluable
 Museum, and to the many examples of classical
 taste and profound skill which have been erected
 under your direction in this Country, as proofs
 of your deep research in, and ardent attachment
 to, the noble art you profess.

With every sentiment of respect,

I remain, Sir,

Your most obedient humble Servant,

Eliza Cressy.

6, Suffolk Street, Pall Mall East, 1826.

PREFACE.

BIOGRAPHY is, of the various kinds of narrative writing, that which is most generally read, and most easily applied to the customary purposes of life and of art: and if to the record of the history and pursuits of scientific men be added judicious critical observations, the subject then becomes important to the historian, instructive to the professor, and interesting to every inquirer. There being in the English language no biographical history devoted to Architects, either ancient or modern, it appeared, that a translation from the best work, embracing such subjects, would be an acceptable addition to the libraries both of architects and amateurs. The celebrated work "*Memorie degli Architetti Antichi e Moderni de Milizia,*" was therefore selected for this purpose; no other author having collected so much information, or exhibited such sound judgment, both with regard to historical research and to critical remarks. In these pages will be found

accurate descriptions of almost every building of celebrity throughout the classic countries of Greece and Italy, gleaned with much labour from ancient writers, or the result of his own knowledge on the subject. The whole forms an entire history of the progress of architecture, from its commencement to the present period; which, if illustrated by drawings and engravings, would become a most useful guide to the young practitioner, and a complete parallel of the art. They should be arranged to suit the chronological order adopted in the text, and may be easily obtained; portraits of the persons and representations of the buildings being by no means rare.

That Milizia's work has always been highly esteemed on the Continent, is evident by an attentive perusal of the architectural and other books connected with the subject which have been published during the last fifty years; in many it will be found, that his opinions have been more generally adopted than acknowledged.

Milizia's observations on the Orders of Architecture, and their details, are very judicious, and worthy the consideration of every professor: these are founded on Roman examples, which at that time were principally studied. Subse-

quent researches have shewn what was the practice of the ancients; the proportions, style, and character of the works of Grecian Architects will be found among the various additions to this edition.

The historical utility of this work is much augmented by the well arranged Index which is attached. Thus, by referring to the lives of Bernini and other architects who were employed in the building of St. Peter's, there will be found an interesting and accurate account of that building, accompanied by the most profound criticisms ever published upon that celebrated structure. Of St. Paul's, also, a complete detailed historical account is inserted in the life of Sir Christopher Wren. The history of other buildings may also be traced in the same way.

The manner, also, in which the Index is arranged will be doubly serviceable; as it exhibits at one glance a catalogue of all the celebrated palaces, churches, or other modern buildings in Europe; and refers to the several accounts given of them in the work.

Milizia not having particularised the authorities from whence he drew his information, an evident defect in an historical work, the trans-

lator has spared no pains in ascertaining and examining them; and they are now attached in their respective places: an addition which must prove satisfactory to every inquiring reader, as affording him an opportunity of reference, and of deriving further information from the original sources; and may also convey some idea of the very extensive research made by our author. It should also be noticed, that the measurements generally given in the original are in Roman palms; for these, English feet and inches have been substituted, principally from the drawings and memoranda of a professional architect, collected in a tour through France, Italy, Greece, &c.; who has also supplied the additional notices of the buildings erected in England during the middle ages; also a great part of the life of Sir Christopher Wren, and all the Memoirs after page 372, vol. ii.

It has been often acknowledged, that it is more difficult to obtain a good style in a translation than in an original work; if, therefore, any formal or harsh sentences occur, the reader, it is hoped, will attribute such to a desire of giving, as near as possible, the precise meaning of the original.

It may be expected, that some account should be given of the author of this as well as many other

works of considerable merit; but it often happens to writers, that they are known only by their works; the incidents of a literary life are seldom observed, and therefore seldom recounted; and no account of Milizia is contained in any of the various biographical writings published since his death; which, considering the high rank he held in society, may be considered rather extraordinary. Fortunately, he has given us the following candid and explicit memoir, which is contained in the Preface to his “*Principi di Architettura Civile*,” seconda edizione.

“ Every man should retrace the events of his own life, in order to allow himself an opportunity of apologizing for the errors he may have committed, and to satisfy the natural curiosity of posterity. These feelings have prompted one, who has transcribed the history of so many, to sketch thus much of his own:—I was born, in 1725, at Oria, a small city of Terra d’ Otranto, in the kingdom of Naples, and am the only one remaining of an opulent and noble family in that unimportant territory. At nine years of age I was sent to Padova, where my uncle practised medicine, and had settled, in consequence of

some youthful indiscretion committed in his native town. After residing with him nearly seven years, and studying the Belles Lettres, though to little profit, a trifling dispute, in which he assumed what I then considered an undue authority over me, induced me to withdraw myself from his protection to Bobbio, near to Piacenza, from whence I wrote to my parents; and after visiting Pavia and Milan, I met my father at Rome, and returned with him to Naples, in which city he left me to pursue my studies. To the celebrated Abate Genovesi I am indebted for my knowledge of logic and metaphysics; and for geometry and medicine to P. Orlandi, a monk of Celestino. But having a restless disposition, and an ardent desire to see other countries, particularly France, I quitted Naples secretly, and commenced my travels; but, on arriving at Leghorn, the want of money obliged me to return to my native town; near which, at length, I retired to a country-house, intending seriously to devote myself to scientific pursuits. At twenty-five years of age I married Donna Teresa Muzio, a noble lady, of Gallipoli, where I fixed my residence, dividing my time between my books and other agreeable recreations.

“ Rendered more independent by the death of my father, I visited Rome, accompanied by my wife, and after remaining there a year and a half we returned to Gallipoli; but, in the course of the next year, I again left it for Rome (1761). The admiration excited in my mind by the venerable antiquities, and by the more modern erections of the “ eternal city,” drew my attention towards architecture, although I was entirely unacquainted with drawing; and after some study and consideration on the subject, I published the ‘ *Vite degli Architetti piu celebri,*’ the first edition of which appeared in Rome 1768, and met with a favourable reception from the public, notwithstanding the severity of my criticisms, and the want of elegance in my style.

“ I then translated the ‘ *Articolo del Salasso,*’ in the Encyclopædia, wrote a small treatise on medicine, and compiled the ‘ *Elementi di Matematiche pure, secondo Abate de la Caille,*’ as an exercise to myself in that science, which was printed at Rome, at the request of some friends. Other works succeeded, and my pen will, no doubt, be employed as long as I have the power of using it:— a Treatise on Theatres excited some controversy at Rome.

“ When a little further advanced in a knowledge of architecture, I wrote, though there was some temerity in the attempt, the ‘ *Elementi di Architettura Civile*,’ which went through several editions. The ‘ *Arte di vedere nelle Belle Arti*,’ is a small work, which much displeased the admirers of Buonarotti. To satisfy the wishes of a friend of high rank, the Cavalier Zulian, ambassador from Venice to the Holy See, I undertook a work, shewing the various beauties and defects of ancient and modern Rome, and published the first part, entitled, ‘ *Roma nelle Belle Arti del Disegno*;’ but the second and third parts were suppressed, to avoid the further observations — I may say persecutions — of ignorant professors. I then turned my attention to natural history, and wrote much on that subject, but only published an ‘ *Introduzione alla Storia Naturale*,’ and a translation of the ‘ *Geografia Fisica di Spagna di Guglielmo Bowles*,’ which was published at Parma. The ‘ *Storia Astronomica Antica e Moderna del Sig. Bailly*,’ falling accidentally into my hands, I abridged it to an octavo volume. The ‘ *Encyclopédie Méthodique*’ supplied me with the means of writing a ‘ *Dizionario portatile delle Belle Arti del Disegno*,’

which was published in two volumes. The article 'del Incisione,' was subsequently added. At the request of my illustrious friend, the Sig. Cav. D. Nicola de Azara, I have been occupied in compiling the works of the Cav. Mengs, and have also completed a 'Dizionario di Medicina domestica sulle traccie di Guglielmo Buchan; Medico Scozzese.' I also intend to publish a sketch 'Sulla Economia Pubblica;' to the consideration of which I have devoted much attention, although the present time is not very favourable to such a subject.

“ It is not uncommon for authors to write elegant and egotistical effusions on their moral and physical character, which often excite a smile. I would willingly delineate my own; but as it has nothing in it singular or extraordinary, I find it difficult to do. Thus, I who have long studied myself, 'know not myself,' and yet have attempted to describe others, sometimes from their writings, which perhaps contain opinions diametrically opposite to their real sentiments. I am phlegmatic, choleric, and haughty; at the same time modest, kind, and capable of endurance; courageous, noble in my ideas, and free from prejudice, open to the reasoning of others,

and fond of novelty. I cannot boast of much penetration or reflection, yet am desirous of possessing every thing; I am industrious, compassionate, a sincere friend, and a good man; humble, without being abject; generous and easy, but severe. I hold in abhorrence every mercenary feeling. I am studious, and anxious of acquiring knowledge of whatever is most useful: my works and discourses have procured me the reputation of being learned. I know myself to be otherwise, and am a heterogeneous compound of contradictions.”

In this singular and amusing sketch we have strong evidence of the success usually attendant on a steady perseverance in the pursuit of knowledge; and a proof that, although not regularly initiated in the principles of architecture in the early part of life, the subsequent industry of Milizia enabled him to become the author of many useful works on its principles and history.

He died at Rome, in March 1798, of a pulmonary complaint, brought on by a cold, to the great regret of his friends and the admirers of the fine arts.

XIII

INTRODUCTION.

BUILDING is the offspring of necessity; and no author has yet been able to give a date to its origin. When man became sensible that it was requisite to defend himself from the inclemencies of the weather, by taking shelter under the branches of trees, or in grottoes and caves, he probably soon after became desirous of more wholesome and convenient accommodation. His cabin would be constructed according to the knowledge he then possessed; his first efforts at construction naturally resulted from an ardent desire to satisfy his urgent necessities, and his buildings would be erected without much reflection, as he would drink or eat, solely to preserve life. There is a wide distance between instinct and art, and between art and science.

Cabins, sometimes conical and sometimes quadrangular, variously formed, were the only habitations for centuries. This primitive construction, which could scarcely be called building, still less the science of architecture, exists even now in some of the most enlightened countries of Europe, though gradually yielding to better taste, produced from the view of those more magnificent structures raised by the refinement of human genius.

As man's intellect expanded, he became discontented with his cottage of rude materials, and began to construct with stone; adapting the form of his dwelling to his various exigencies, and to local circumstances. Convenience was the first consideration, next solidity, and finally beauty. After numerous attempts, a long series of errors, accidents,

discoveries, and corrections, the art of building was perfected.

The rudiments of this art most probably originated in Asia and Egypt: Babylonia and Nineveh, Thebes and Memphis, with their labyrinths, pyramids, and obelisks, seem to authorise this idea: but Greece offers us still stronger evidence; there we yet see examples of the primitive Doric, in the temple of Thoricion at Athens; that of Apollo at Delos; and the temple of Corinth: they much resemble those of Pestum, in which we discover something more than art,—a passage seems to be opened from art to science.

The science of architecture we certainly owe to the Greeks; and it is theory and practice which constitute the principal difference between science and art. The latter is a system of knowledge, reduced to positive rule, invariable, and independent of caprice or opinion. Science is the knowledge of the relation which a certain number of facts have to each other, and necessarily supposes the previous existence and discovery of these facts. This is the work of the senses only. The most active and penetrating talent is but weak compared with the consciousness of our necessities, which imperiously command our attention. But for the agreeable or painful sensations excited in us by the circumstances with which we are surrounded, we should be ignorant of the most common properties. Accident has shewn the cause of some, and the love of ease, from whence springs an instinct infinitely more perspicuous than reason itself, has made us feel their use. Thus the wants of man rendered him an artisan; he cultivated the principles of art by the force of nature, widely differing from that perfect reasoning, which can alone produce science, after a long course of years.

These observations by no means detract from the merit of the ancient inventors of our arts, nor from the glory which is due to them. Although their works were simple

and rude, they should be regarded as the most ingenious of their times ; human intellect being then in its infancy, and science yet unborn: they were all that they had the power of being. The strength and extension of talents is not so much the work of nature, as of the time and country in which accident has placed us. Had Palladio been an antediluvian, all the power of his genius would probably have been shewn in putting together some cabin or hut, but never in combining the orders and disposing the ornaments of architecture. Thus also the great Newton, who could measure the universe, and calculate the infinity of space, would perhaps have exhausted all the energies of his understanding in reckoning the number ten, had he been born among those American nations, where the very best calculators cannot exceed the number three. He who first erected the most simple hovel, although much inferior to our rudest builders, was to his contemporaries a great man, and deserving of equal eulogium with our most intelligent architects. Every art and science is, then, the offspring of necessity, and grows slowly to maturity, from the desire of improvement: it is the work of philosophy to bring it to perfection.

If the Greeks were the first imitators of architecture, that is, of the art and science of building, what path did they pursue to arrive at so noble a termination? cottages could have been their only model. It is therefore apparent, that they must have imitated these in stone, with a constant inclination to improve their beauty, convenience, and solidity.

THE ORIGIN OF ARCHITECTURE.

Trunks of trees vertically placed to support the roofs of the first habitations, were easily converted into columns, sometimes plain, at others channelled, or spirally orna-

mented, which variations we often see in nature. A base was then required to give them the necessary solidity. The capital was also equally necessary at the top of the shaft, which former gradually widening, was better calculated to receive the horizontal beam. The ornaments of these capitals, the leaves, volutes, caulicoli, and festoons, would naturally be derived from the branches left at the top of the trunks; which branches, covered with leaves and flowers, would be pressed by their load, and take various directions and forms.

The columns would be determined by various circumstances, according to the nature of the trees employed, and the weight they had to support; some slight, some heavy, and some of the medium size. Hence the three orders of architecture, the Doric, robust; the Ionic, slight; and the Corinthian, delicate.

Upon the vertical trunks was placed the roof to cover the habitation; and thus originated the entablature or upper ornament of the orders, which is composed of three parts: 1st, The architrave, that is, the principal beam, placed horizontally over the vertical supports. 2nd, Over the architrave were the small beams, placed across; this is the origin of the frieze: the heads of the beams are expressed in the Doric by the triglyphs, and their intervals by the metopes. 3d, The rafters, to place the tiles upon, with a sufficient projection to protect the building below from the rain. From this covering is formed the cornice, variously expressed either by mutules, modillions, or consoles, which are the supports of the roof, and sometimes incline or overhang, to allow of the water passing off with more ease. This cornice is occasionally plain, in the supposition that the ends of the beams are covered with a coat of plaster.

From the covering or roof of the hut overhanging, arise the fastigi, called pediments, which were made more or less acute, according to the nature of the climate.

The vertical trunks, or columns, were at first placed at such a distance from each other, that the architrave with the whole weight of the roof should be sufficiently supported: hence the intercolumniations. But these being required more spacious, in order to carry materials of greater weight and importance, two pieces of wood were fixed into the vertical beams, inclining towards each other, which pointed to the architrave, and supported part of the weight. Hence the origin of arches of various forms, and of vaultings, which in the interior of edifices are only continued arches.

For greater strength or defence, the intercolumniations were afterwards closed; leaving, however, in the apertures doors and windows, for the convenience and comfort of the inhabitants; bas-reliefs may be derived from a similar cause, as well as the columns set or encased in the walls. The spaces might sometimes be closed by boards variously disposed with beams or rude stones, horizontally placed one over the other, so that the joining should correspond alternately: from these incidental circumstances have arisen plain walls, recesses in them, and rustic work, with projections or bossages.

The better to preserve the dwellings from the damp arising from the earth, they were elevated on wood or stone; hence pedestals, plinths, or basements. As a protection also from the rain, there were fixed over the doors and windows pieces of inclined boards; which produced small cornices and pediments. Porticoes were likewise placed before edifices for the same purpose.

And whence should stairs be derived, but from the trunks regularly laid in an inclined plane? The steps might be suggested from ladders, or from the sticks put across the apertures of the first habitations, to prevent the children or domestic animals from falling or getting out. In this manner, from the structure of the hut, have arisen the orders with all their attributes; and by following the

same track, we may discover the origin and cause of every other circumstance relative to architecture.

This is most probably the simple and natural road followed by the Greeks, to reduce building to an art and science, in fact, to architecture; first to satisfy their necessities and conveniences, and finally to procure and enjoy all the pleasures of life.

OF THE ESSENTIALS OF ARCHITECTURE.

We have determined that architecture, like the rest of the fine arts, is imitative; differing only in this, that some have a positive model in nature. This model is wanting in architecture; but she has another substituted by the industry of man: viz. the construction of their first habitations. The rude cottage is a model for all we discover in civil architecture.

Although building be one of the most universal and early occupations of man, and anterior to painting and sculpture, it does not therefore follow, that architecture can boast a similar antiquity. Painting and sculpture appear more easy, not only from the facility with which colours and clay may be managed, but also from the frequency with which nature presents originals for their imitation. On the contrary, architecture, before it can be considered such, according to our definition, which for greater clearness we again call the art and science of building, must suffer much for want of a model. From the same cause it is more subject to innovation and decline. It continually requires the assistance of reason, and few subjects are more difficult to study: it is not easy to account for the restriction to which the column is confined; and yet without the due proportions, it becomes either a pole or an unmeaning mass.

Architecture, like every other fine art, is subject to the

following general rules: 1st, In all its productions there should be an agreeable relation between the parts and the whole; which is comprehended under the name of symmetry.

2nd, Variety, which prevents an object from becoming tiresome to the spectator; and unity, which prevents disorder and confusion, and is called eurythmy.

3rd, Convenience is necessary, then ornament, which makes a just use of symmetry and eurythmy, and of the relation which there should be between an edifice and its destiny, and between the ornaments and quality of the building, adopting those most conformable to its magnificence, elegance, or simplicity.

4th, If architecture be the daughter of necessity, even its beauties should appear to result from such. In no part of the decoration should there be any artifice discoverable; hence, every thing extraneous is a proof of bad taste.

5th, The principal features of architecture are its orders, or, more properly, they are the essentials of building; and are therefore considered as ornaments only when usefully placed: and all other architectural ornaments are subject to the same laws.

6th, Nothing must be introduced which has not its proper office, and is not an integral part of the fabric itself; so that whatever is represented must appear of service.

7th, No arrangement must be made for which a good reason cannot be assigned.

8th, These reasons must be deduced from the origin and analysis of that primitive architecture, of the cottage which, as we before observed, was the origin of civil architecture. This is the directing rule of artists in their work, and of the learned in the examining of them. Every thing must be founded upon truth or its similitude. Whatever cannot really and truly exist, cannot be approved of in representation.

9th, Examples and authority, however great they may be, should have no effect on the reason.

These principles are all positive, constant, and general; they are the absolute properties of the art, regulated by good sense, and, taken together, constitute the real and essential beauty of architecture. But if once lost sight of, architecture disappears; it is no longer a science or an art, but becomes mannered, capricious, and absurd.

THE CHANGES THAT HAVE TAKEN PLACE IN ARCHITECTURE.

Either from an inattention to these principles, from want of care, or from their not being well understood, architecture has suffered great changes. Established in Greece at the glorious time of Pericles, four or five centuries before the vulgar æra, it continued vigorously to flourish till the time of Alexander of Macedon, in some countries of Asia, and even in Egypt. It was adopted by the Romans during the time of the republic, and was encouraged throughout the whole of their vast empire, if not with any increase of beauty, certainly with additional majesty and magnificence. It declined under Constantine into a heavy disproportioned style, improperly called *Gothic*. Under the Lungobardians and Charlemagne, it became still worse. In the tenth century it again changed, and from the excess of heaviness, assumed an equal excess of lightness; every part was perforated and embattled: this was called the *Modern Gothic*, and, for distinction, *the Gothic*. It was considered still more beautiful when loaded with little arabesque and Moorish ornaments. It revived again in the thirteenth and fourteenth centuries under the name of modern Greek, combining the arabesque with the Greek orders, of tolerable proportions. Finally, arts and science again arose in the

fifteenth century, and Greek-Roman architecture with them; or, to speak more correctly, an admiration for them was rekindled; but between the estimation and the practice there is a wide difference. It is now three centuries since the Grecian architecture has been generally admired throughout Europe, while the Gothic has been proportionably decried. But in abandoning the one, have we followed the other? It rather appears that a new species has been adopted, equally removed from the lightness of the Gothic, or from the majestic elegance of the Greek.

The cause of these changes, and of the actual state of architecture, is in the negligence of its principles, which point out fixed rules for beauty, convenience, and solidity, the three great requisites for every kind of building. Whoever reasons justly on these principles, is secure of being correct in his taste, examination, and execution, of whatever architectural work he may undertake. Nothing is more difficult to the human understanding than logic, or in the execution than a complete building.

ON BEAUTY.

The beauty of civil architecture depends on ornament, symmetry, eurythmy, and convenience.

By ornament is understood that decoration which is continued through the whole body of the building. The principal of these are, the orders, sculptures, paintings, marbles, stuccoes, &c.

An order is composed of a column and entablature. The principal parts of the column are the base, the shaft, and the capital; those of the entablature, are the architrave, frieze, and cornice.

OF THE ORDERS.

There are but three orders, viz. the solid, the medium, and the delicate. To solidity, simplicity is the most appropriate; to the medium, elegance; and to the delicate, richness. To these styles are three corresponding orders; the Doric, simple and strong; the Ionic, elegant; and the Corinthian, slight and ornamented. In rising either above the Corinthian, or falling below the Doric, we lose all grace.

The diameter of the column, taken at the imo scapo; or immediately above the lower *listel*, with regard to its height, follows in this simple proportion:—

Doric.	Ionic.	Corinthian.
$\frac{1}{8}$	$\frac{1}{9}$	$\frac{1}{10}$

Each of these columns require a proportionate entablature; for the stronger support should carry the greatest weight, and the most delicate the lightest. Hence the height of the entablature, with regard to the height of the column, will be—

Doric.	Ionic.	Corinthian.
$\frac{2}{8}$	$\frac{2}{9}$	$\frac{2}{10}$

And the diameters of the column, with regard to the whole height of the order, is—

Doric.	Ionic.	Corinthian.
$\frac{1}{10}$	$\frac{1}{11}$	$\frac{1}{12}$

The general rules are, however, sometimes susceptible of alterations, according to various circumstances, which an architect will consider. The nearer the columns are to each other, the thicker they will appear; and the higher they are raised on a pedestal or basement, the greater will

be their length in effect. When exposed in open air, or on a dark ground, they will appear more slender, as the air is said to diminish their size. The greater number of channels give a greater appearance of thickness to the shaft. These, and other considerations, will enable an architect to increase or diminish the columns: but such a change must be done with moderation, and not without the most mature thought.

DORIC.

The Doric having been the earliest invented, has been consequently subject to many variations. At first it had no fixed rules, and the height of its columns was about five diameters; sometimes four. At the time of Pericles it had attained six diameters, and the Romans raised it to seven and half, and sometimes to eight, by adding a base, which was never used by the Greeks.

The base proper for this order, when one is required, is that generally called the Tuscan, which is beautiful, though simple. This masculine order does not allow of a multiplicity of mouldings, nor a trifling division of parts; nor does its capital admit of small separate members. It is beautiful and strong, and consists only of three divisions: the necking, the ovolo with its gradations, and the abacus with its cimacium; the whole gradually acquires strength and sharpness as it rises from the shaft. The contrary should be the case with the base, which only admit of three or four principal divisions, otherwise they would diminish into littleness,—an effect at all times contrary to good taste. The most strength should be given to the lower member, which must have the greatest height; that above requires less, and the upper, which is the lightest, still less.

The architrave must not be divided into a number of

faces, but only crowned by a small band. The frieze is generally expressed by metopes and triglyphs; the latter channelled for the carrying off the water, which is supposed to run from the corona to the mutules and triglyphs, at the bottom of which it terminates in drops: hence these drops ought not to be represented by cones, or truncated pyramids, but by guttæ.

Architects have imposed on themselves the rigorous law of making the metopes perfectly square, and placing the triglyphs over the centre of the columns. These two restrictions, being sometimes difficult of accomplishment, have produced a variety of absurdities, which may readily be avoided by those who study the matter.

To use dentels in the Doric cornice, as practised by Vignola, after the example of several ancient edifices, is manifestly contrary to good sense; not only because they are an ornament too delicate for this order, but also because they cannot be placed under the mutules.

If the dentels represent the ends of the rafters, it must be inconsistent to introduce mutules above them, which denote the same thing.

IONIC.

The Ionic column was originally of eight diameters, but the Romans increased it to nine.

The base assigned to it by Vitruvius is practised by some moderns, and is the reverse of what every base ought to be, the members of which should diminish in strength and projection, in proportion as they approach the shaft of the column. Here it is precisely the contrary, the thickest members are placed on the most weak. The proper base for this order is the attic, which is more elegant than the Doric, and less rich than the Corinthian. The Greeks used no plinth.

Its ancient capital is generally formed of two parallel bolsters, or pillows, each tied in the centre by a band, forming two faces, ornamented by volutes. This capital is inconvenient on account of the angular columns towards the flank presenting a different aspect to those in front. To avoid this, the ancients used in the angular columns small pillows, not parallel, united at the internal angle, and at the exterior one a double volute. Another ancient capital has a volute disjoined at each of the four angles, so that it is seen alike on all sides, as in the temple of Concord. This has been improved by Scamozzi, who left these volutes open, and elegantly ornamented them with a fillet. Finally, there is another Ionic capital, attributed to Michael Angelo, consisting of two bolsters, like bells, with two faces, an abacus heavily carved, two festoons suspended to the eyes of the volutes, and four heads. The invention is not one of his happiest efforts. The architrave has a better effect with two faces than three, reserving the third for the Corinthian, the more readily to shew the gradations of the order. For this reason the frieze should be plain, or with very little ornament.

In the cornice, the lightest pieces of timber are the rafters, which express the dentels. These should not be under the corona, as always practised, but above, where the rafters really are. Scamozzi alone has omitted these.

CORINTHIAN.

In the Corinthian order it was the object of the Greeks to display the greatest delicacy and the utmost magnificence. The height of the column was originally eight diameters and a quarter, as in the tower of Cyrrhestes at Athens, where, however, there is no base: it was subsequently fixed at ten diameters.

The base used in this order has the disagreeable repetition of the double astragal immediately between the two scotias. An attic augmented by an astragal placed above each torus, and a cavetto, with two listels above it, is much preferable.

The Corinthian capital has a most exquisite grace and elegance. It consists of four parts, which increase in size as they rise; these are the small leaves, the larger, the caulicoli, and the abacus. In each space, between the leaves, is represented the basket, in allusion to the invention of Callimachus.

The entablature differs little from that of the Ionic, except in some of the smaller details. The architrave has three fascies, each surmounted by its band. The frieze is plain, but allows of ornament when required. The cornice is composed of pieces of wood larger than the rafter; that is, they represent the head of the beams, and are called modillions: but, if the Corinthian is more delicate than the Ionic, it is necessary that the parts should be more delicately expressed. The modillions, therefore, would be more consonant to Ionic, and the dentels to the Corinthian, provided they were properly placed, that is, above the corona. It would, perhaps, be better to suppress them, and apply to this cornice elegant carved modillions, and to the Ionic large and plain ones.

If the channelling is for ornament, they should be reserved for the Corinthian shaft. They are not proper in the interior of edifices where the rain cannot enter, and where it cannot consequently be imagined that these channels are caused by the course of the water.

Fluted columns should be used where it is required to make them appear larger than they really are; as the eye ranging round these flutes, and resting on a greater surface, the effect of increased size will be produced. Flutes are disagreeable in marble columns of various colours; if spiral, they are insufferable, because contrary

to nature; nor should metal be ever introduced into the flutes of coloured marble columns. The leaves, also, that entwine columns should be managed with parsimony and grace, in order that the diameter should not be altered.

Plain round columns produce the best effect; twisted or spiral ones, as in the tribune of the Vatican, are as unsightly as crooked legs.

Columns should be diminished from a third of their height towards the top, this being the case with trees; but to make them swell in the middle is the effect of ignorance. The diminution must be in proportion to the size of the column; thus, it should be a sixth in the Corinthian, a seventh in the Ionic, and an eighth in the Doric.

Each of the above orders should preserve their particular characters. Each may be altered as occasion may require, but no mixture must be allowed. A Doric with the Corinthian cornice, a Corinthian with the Doric entablature, are as visible deformities as a soldier with a coif, or a child with a grenadier's cap. Each order is susceptible of improvement in its proportions, its parts, form, distribution of the members, and the lighter ornaments; but a new order, although so frequently attempted, never can be formed, because the three already named are sufficient for any character of building; and whatever opinion some may hold on the subject, none but the above-named alterations can be effected.

TUSCAN AND COMPOSITE.

The order called Tuscan, and the other called Composite, which have induced the moderns to reckon five orders in architecture, are, in fact, any thing but distinct orders. The Tuscan is but a more simple Doric, and the Composite does not differ much from the Corinthian.

OF PERSIANS AND CARYATIDES.

Still less can the above deformities be designated orders, though by some so distinguished. Some Persians and female slaves of Caria being taken prisoners, were by the Greeks most absurdly represented in their buildings: to these succeeded heroes, gods, and satyrs, who were to support a whole fabric on their heads, the half of their bodies being set into the wall, the rest projecting, and terminating in fish and leaves.

ATTIC.

The attic is a low wall at the top of buildings, to conceal the roof; or a species of plinth, to separate orders when placed over each other, or to shew the springing of the vault; and therefore can only admit of small orders as decorations.

RUSTIC.

The rustic is only an assemblage of rough rude stones, called bugne or bozze, which was suitable to some walls, but by no means constitute an order; much less should they ever encumber columns, particularly the Ionic, as is sometimes most absurdly practised.

PEDESTALS.

Pedestals are not integral parts of the orders, but the use of them must be tolerated as circumstances may require; as where the soil cannot be reduced to one level, they are remedies; and it is always to be regretted when

there is a necessity for them. They should be continued as a simple basement, and kept ^{as} low as possible, otherwise a variety of ill effects are produced. 1st, They deprive the column of its noble and majestic air. 2d, The angles of their cornice are liable to fracture, if not out of reach. 3d, Having a projection, they cause the rain to rebound, which is injurious to the bases of the columns. 4th, Resting against the wall, they form a mass of unequal bases, extremely discordant. 5th, They lessen the lower intercolumniation, where the greatest space is required. To place them one over the other, like piles of wood, as is generally practised, is an extravagance.

PILASTERS.

Pilasters are square columns, and in consequence, require the characteristic of a column, bases, diminution, capital, &c. They are, however, not so beautiful as columns, and are consequently not so much used. They are never isolated; they are requisite at the angles of the walls, but rarely look well in the façades. Those placed at the back, and at a little distance from the column, are evidently useless. It is an error to make them mere veneers, and put them in clusters at the angles.

INTERCOLUMNS.

In order to proportion the spaces between the columns, regard must be had to solidity, convenience, and beauty; so that the spaces should never be so great as to destroy the real or apparent solidity; nor so narrow as to render them useless. It is evident, that if large columns are placed too near together they appear thicker, and if delicate ones are placed too far distant, they have the ap-

pearance of greater delicacy; thus the Corinthian intercolumniation may be two diameters, the Ionic two and a half, and the Doric three; but a little more or less is allowable, as may be required.

In every species of edifice, an equality in the intercolumniation pleases, though the moderns appear but little sensible of this. The centre one may certainly be a trifle wider than the rest. The columns at the angles should be a little thicker, not only on account of greater solidity being required there, but also to produce greater beauty, because being surrounded by the air, they appear more slender.

When columns are near, or set into the walls, the intercolumniations should be so arranged that the jambs of the doors, windows, and niches, should be close to the plinth of the columns.

From the rule here laid down for the intercolumniations, we may conclude that the custom so frequently adopted by the moderns of coupling the columns, is by no means commendable, unless in a case of necessity. Their real use is in a building where the thickness of the wall is too great to be expressed by a single column.

ARCHES

Are not so magnificent or beautiful as simple colonnades; but they are more solid, less expensive, and more convenient for entrances and all large openings.

To spring arches over columns is a barbarism, and an offence against all solidity, real or apparent. To spring them from an entablature, and to place at the sides of the piers columns to support the before-mentioned entablature level, is an elegant arrangement, when the lesser intercolumniation is according to prescribed rule. The most natural is to place them over simple piers.

The height of the openings should be about double their

width : in the Doric it may be a little less than double ; in the Ionic exactly double, and in the Corinthian a little more.

The width of the pier should not be much more than half, nor less than two-fifths of the width of the opening. Their thickness should not be less than a fourth, nor more than a third of the width of the arch. Columns are sometimes united to the piers, though they are seldom required, and never produce a good effect.

The beauty of an arcade depends, 1st, on the form of the opening ; 2d, on the application of the orders ; 3d, on the exactness of the parts of which it is comprised, and the size of its piers ; 4th, on the imposts ; 5th, on the archivolt ; 6th, on the key-stone.

1st, The best form is the semicircular : the elliptical, the pointed, and the Gothic, are less agreeable to the eye, but are stronger, according to the height given to them. Their relations must correspond with the character of the order to which they are adapted.

2d, The orders should predominate over every other part, without appearing either colossal or dwarfish ; some little plinth may be allowed, to prevent their being injured. The columns should be isolated, or not more than half set in the walls. The intercolumniation should comprise the width of the arch and the wings.

3d, The wings are portions of the piers on each side of the column or pilaster : their width should be according to the orders, and their best proportion is the semi-diameter of the column.

4th, The imposts should never cut the column. They should appear strong in proportion to the size of the arches ; their office being to receive the fall of the arch, and to unite the two curves so that they should not appear to thrust out the piers.

5th, The archivolt, or front of the arch, must unite with the impost, but should project less ; nor should

the lower ornament of the architrave extend beyond it. Its ornaments require a distinct character, and should bear relation to the order.

6th, If the arches are large, the key-stone must not be omitted, and may be represented as a corbel supporting the architrave, which, from its great length, requires something in the centre. They are useless in small arches, and where there are no orders. The key-stone, from its situation, being very visible, should have an agreeable form, solidity, and ornaments analogous to the order; scrolls are too trifling, and masked heads very improper. Its relation must be like those of the wedges which form the arch; these may be thirteen in the Doric, fourteen in the Ionic, and fifteen in the Corinthian. But when the wedges are not used, as in delicate orders, the inferior width of the key-stone may be equal to that of the arch-volt, and its height about a diameter: its projection must never exceed that of the architrave.

THE UPPER POSITION OF THE ORDERS.

The upper position of the orders produces great inconvenience, if the cornice of the lower orders is not suppressed. The cornice is the last part of an edifice. It should therefore only be placed at the top, and to the last order, where it performs its office with propriety, which is to protect the building below from rain.

Solidity requires that the strongest order should be underneath. The same order must never be repeated, nor the intermediate order omitted, as the Corinthian over the Doric; this would produce too great height in the upper column, or too wide an intercolumniation. In placing the columns one over the other, their bases should plumb exactly perpendicularly. There should not be more pilasters or columns put above than there are below, otherwise the

upper will be placed against all principle: the lower diameter of the upper column should be equal to the upper diameter of the lower column, as if these columns were one long tree cut horizontally into several trunks. If the columns are diminished on account of their delicacy, the upper intercolumniation should be proportioned thereto. A continued plinth is only allowable between the orders, but no pedestals.

In all the ornaments of which we have hitherto spoken, and in all others used in buildings, we must never lose sight of the two following rules:—

1st, All the profiles of the minor parts of the vaults, as well as archivolt, the door, windows, niches, &c. should be in their whole, and in each of their principal members, always smaller than those of the orders, entablatures, or other ornaments, which form the principal features in the same composition.

2d, The profiles at the extremities, and their members, should be continued in one uninterrupted line throughout the edifice.

SYMMETRY.

Symmetry consists in that proportion which the parts should have towards each other, and to the whole. For example, the height of a door should be proportioned to its width, and these to the size of the whole edifice. This it is that produces symmetry, which it appears, therefore, is the same as proportion.

Proportion is the most beautiful and the principal feature in architecture. A building devoid of all ornament, and without any other merit than a justness of proportion, will always produce a beautiful effect, and be sufficient in itself. On the contrary, the richest edifice wanting of proportion can never be beautiful.

PROPORTIONS.

The rules of proportion depend absolutely on that branch of optics called perspective; that is, on the manner in which we see objects at various distances, and in various situations. An architectural object appears beautiful to us, when its principal parts are so united, that the eye shall be gradually led from its greatest to its least considerable part, according to the various degrees of importance that these parts possess in the composition, in order that their various images should be impressed on the mind before it is affected by any of the subaltern members. These again should be so treated as not to be absorbed by the former, but should be equally capable of exciting distinct ideas suitable to the purpose for which they may be intended.

An edifice then, is well proportioned, if the eye easily comprehends all its parts, if the impressions on this organ are not too diffuse, but all concur to produce an harmonious whole. When an edifice is too wide with regard to its height, it will impress the sight as being larger than it really is. The width only will be considered, and it will be impossible to take the whole of the edifice at one glance; an unharmonious impression will be the result, and the object will be rendered disagreeable.

But—What numbers constitute this agreement in the proportions of architecture? This is a great question, and has been such from time immemorial.

It has been demonstrated by the best architects, that the proportions of architecture do not consist in any of the four famous proportions, geometrical, arithmetical, harmonic and counter-harmonic, nor in exactness of commensurability. Experience alone has guided us in the discovery of relations most agreeable to the eye. The inventors of art were ingenious, as Vitruvius relates, in

applying the male and female proportions to the orders, or, as appears more probable, those of various trees; and thus, by repeated attempts, they have been enabled to fix those relations of length, breadth, and height, which are agreeable to the eye, without being guided by any of the before-mentioned proportions. They are therefore founded on nature, and on the wants which we feel of solidity and convenience. If nature had produced all her largest trees as delicate as the stalks of grain, and at the same time strong enough to sustain the greatest weights, the proportions of our architectural orders would have been on the model of these delicate stalks. Whatever is beautiful in art is deduced from the productions of nature, and applied to our wants and convenience. Thus the doors, windows, and arches, are in height double their width, because our convenience requires that this should be the case to render easy our egress and ingress. The necessities, wants, and convenience of men, are the real origin of these proportions, and custom has confirmed them, and rendered them beautiful.

Hence has arisen the different national styles of architecture. The Egyptians, whose country abounded more in marble than in wood, delighted in heavy masses. Other people, of smaller and more delicate stature, living amidst tender plants, have preferred a low and light style. The Grecian was analogous to the temperature of the climate, equally abounding in marble and vegetables, and with men of temperate habits and active talents. The Romans, in a less benign climate, and more abounding in trees than in marble, in copying the Grecian architecture made it more lofty and delicate, without however improving it. To what a much greater degree of delicacy would the people of the north carry it, almost entirely deprived of stone, and living amidst woods and snows. And the Moorish, which is composed of pierced and filligree

work, was the delight of those barbarous nations of the sun.

Notwithstanding these national peculiarities, there is a taste common to all, which equally affects the mind in all countries. If, for example, width predominates over height in an edifice, we are struck with an idea of majesty and strength; if height predominates, we receive the impression of delicacy and elegance: these are points which please us. But an excess of width degenerates into heaviness, and of height into meagreness: these displease. Perfect proportion, then, consists in a medium between these two extremes.

To fix this medium is the province of architecture, which has no other foundation than experience in that branch of optics which determines our manner of seeing conveniently and distinctly objects in various situations.

Three things concur in determining the distance from which we see an object:—1st, The quantity of light contained in the object itself. 2d, The gradation of light between neighbouring and intermediate objects seen at the same time. 3d, The rise of the angle which the object forms with the eye.

1st, The more luminous, or the more powerful in colour an object is, the nearer and smaller it appears. The architect, therefore, will have regard not only to the situation of his edifice, whether it will be more or less lighted, but also to the different colours of the materials. If the columns and ornaments are of white marble in a building of dark brick, they should be larger than if of coloured marble, because gilding, white stuccoes, and strong light, lessen the largest things.

On the contrary, objects but weakly lighted appear further distant and larger on account of that darkness and weakness of colour; therefore, buildings by moonlight

appear larger and further distant. Thus architects, in employing orders to be seen from a distance, should express the buildings in white materials, very large, and with much strength, in order that the just proportions may be seen.

2d, The more distinct the parts of an object are seen, the nearer they appear; and, on the contrary, they will appear more distant, in proportion as their parts are more confused. How absurd, then, for architects to lose their time in drawing those minute ornaments, which look so well in their designs, but so ill in our buildings. It is not on paper, nor in little models, that those things are to be considered, but on buildings which will be looked at from their just point of view.

An object appears more distant and larger when several intermediate objects are between that and the spectator; and in proportion as these are more illuminated, the larger and more distant will the principal one be, especially if it be darker than the former. A walk, therefore, a portico, a temple, will appear larger, when surrounded by a number of trees or isolated columns. If then, an architect wishes to give an air of great vastness to a particular spot, or to his principal edifice, he will place intermediate objects around it, and keep the edifice itself as dark as possible.

3d, The most general means which we have of judging of the distance and size of objects, is the optical or visual angle formed by the optical rays, which are drawn from the extremity of an object to the centre of our eye. The distance and size of an object, therefore, is in an inverse ratio to the size of the visual angle. For instance, experience demonstrates to us that a man seen at the distance of four or eight steps appears of the same size. Our feeling, then, contradicts the mechanism of the organs. Whence arises this contradiction?

We judge of size and distance not by the power of the

optical angle, but by that of experience, acquired by touching and measuring. It also teaches us, that if an object is too distant, we see it small and confusedly. Now the same power will enable us to decide, that at whatever distance we see an object, its size is in fact the same. If by any circumstances we have no idea of the distance or size, we shall then be obliged to judge of objects by the optical angle, and by the image which it impresses on our eye. Suppose, from the top of a tower, we discover an object at a distance too great to distinguish what it is, and apparently not more than two feet high, we afterwards find it to be a man, and presently that he is of the ordinary stature. Whence arises such a difference of opinions? While the object was unknown, we saw it only through the visual angle, and no experience can induce us to doubt the traces made on the retina; but the moment we discover it to be a man, the connexion which experience has formed in the mind between the idea of a man and of the height of five or six feet, obliges us without reflection instantly to see one of that height which in fact he is.

Whenever, then, objects are used, the size of which is unknown to the generality of spectators, as orders, vases, trophies, their dimensions should be regulated by the rules of optics, in order that they should appear, from the point of view at which they are placed, of the size they may be required; but when familiar objects are used, as statues, they should be as nearly as possible of their natural size, in order that they should appear as they really are.

If the same objects are all on one plane, above the eye, the farthest will appear the lowest. Therefore, in entablatures it is necessary to make the members at the back incline forwards. In narrow situations, to be looked at from below, the level parts should be increased in size, as in the corona, and less projection given to the other members.

The upper parts of objects at a certain height appear to incline forwards; so that pediments and statues should be receded in the same proportions, to make them appear upright.

Experience teaches us, that if a vertical object makes an angle of forty-five degrees, we can look at it from below with perfect convenience; if the angle is increased to seventy, the object becomes inconvenient for the spectator to look at; and if greater than that, the body must be placed in too uneasy a position to derive any pleasure. An angle of twenty degrees is as inconvenient as one of seventy, and both are equally removed from forty-five, which is the medium angle. Therefore, any part of architecture susceptible of height, will appear too low if it makes an angle of less than twenty degrees, and too high if more than seventy. These inconvenient extremes should always be avoided.

The point of distance and sight varies according to the form of an edifice. If its height be equal to its length, the point of view may be fixed on the zenith of an equilateral triangle, which shall have for its base the width of the edifice; but where the height is not equal to the length, the point of view should be at the zenith of an isosceles triangle, formed of the base and height of the edifice.

Others determine this point of sight to be half the height of the edifice, and the length of the façade. Thus, supposing the height to be forty, and the length eighty, the point of sight will be sixty feet distant from the building.

GENERAL PROPORTIONS OF FACADES.

Façades have but two dimensions, height and length: 1st, If the height is equal to the length the form is

square, which suits the façades of churches, gates of cities, triumphal arches, and pavilions. 2d, A length greater than the height is suitable to houses, porticoes, &c. For the former, the length should not exceed the third of the height; for the latter, not more than a fifth; if more is required, it is better to break it by pavilions of various forms, which in large façades produce a good effect. 3d, Height exceeding length is suitable to cupolas, pyramids, campaniles, and towers. For cupolas the just height is between a half and a third of the length; for the other edifices, between a fourth and a ninth. These proportions are required by the eye.

The elevation of the façade should be proportioned to the size of the space from whence it is to be seen. If the space is very vast, the façade must be raised to a sufficient height, that, when viewed from the centre of the space, it should be seen under an angle of forty-five degrees.

It is necessary also to have some regard to the situation of the edifice, whether it be elevated, isolated, light, surrounded by other lofty objects, or low. These circumstances must always make an alteration in the prescribed relations; and in these alterations the architect will shew his ability, so as to render the work agreeable.

PROPORTIONS OF THE PARTS WITH THE WHOLE IN FACADES.

Façades have either some architectural order, or are destitute of them.

1st, The exterior decorations should be divided into large parts; there are therefore but few edifices which can allow of more than two orders of architecture. Ordinary edifices should have only one, raised on a plinth as a surbase. This plinth may be one or two diameters high; but the less it is, the more noble will the order appear.

One order never can contain many stories, because each story having its floor and architraves, the intermediate ones must cut the shaft of the order. If every story had its order, a house of three or four would have as many orders, whilst palaces scarcely ever have more than two. A multiplicity of orders, one over the other, produces a smallness of parts, contrary to the majesty required. Their diameter must be determined by the height of the story in which they are used, so that the columns be proportioned to the whole.

2d, In the façades devoid of orders, a just relation of the parts with the whole is required. To regulate this relation, it is easy to suppose an order to each story; and if they are numerous, every thing will be small. It is better to suppose one single order placed on a plinth, and then so to arrange the stories, that they decrease in height as they rise. In houses of two stories, the whole height may be divided into five parts, giving three to the first and two to the second; or into twelve, seven to the first and five to the second. If the edifice has three stories, it may be divided into nine, four to the first, three to the second, and two to the third; or into fifteen, and then divide into six, five, and four.

GENERAL PROPORTIONS IN THE INTERIOR OF EDIFICES.

The interior of edifices may be divided into three parts; 1st, some with three equal dimensions; 2d, others of two equal dimensions; 3d, others of three unequal dimensions.

1st, Of the first kind are all the varieties of apartments; as halls, rooms, anterooms, closets, &c. To the cubical form of these may be substituted the round, the polygon,

the mixed, &c.; and then the diameter of the square circumscribed by the plane of these figures determines their height.

2d, Those of two equal dimensions are of two kinds, rectangular in the height or length.

The rectangle in height is suitable to cupolas, saloons, vestibules, and staircases. They must not be more than triple their width. If higher, their soffit will be seen under an angle of more than seventy degrees, and consequently in an inconvenient manner.

The rectangle in length is suitable to halls and galleries. For halls, the best proportion is double the length, or double the width; for galleries, a fourth or fifth.

3d, Inequality in the three divisions belongs to churches, porticoes, and elsewhere. In these, then, some liberty may be taken.

If an order is to be used in a well-proportioned edifice, the diameter must be proportioned to the capacity of the place; the larger this is, the greater must be the diameter. The height is divided into nine parts for the Doric, ten for the Ionic, and eleven for the Corinthian. One of these parts must be the diameter of the order, which, if the general proportions are good, will be proportioned to the place.

In places that are vaulted, from the total height, the semi-diameter of the vault must be allowed, and the rest given to the orders. In the interiors, where two orders are used over each other, the semi-diameter of the vault must be subtracted from the height, and the rest divided into two equal parts. But cornices must always be avoided in the interior; there being no necessity for protection against rain.

EURYTHMIA.

The uniform correspondence of similar parts; as that each side shall be similarly disposed, and produce a generally elegant effect; thus the gate must be in the centre of the façade, with an equal number of windows on each side, of the same proportions, form, and decorations. This constitutes eurythmia.

This quality generally pleases, because it enables us to perceive at once the whole of an object: but variety also pleases us, and the one is not at variance with the other. Wherever we see a whole at one glance, eurythmia is necessary and elegant, as in a parterre, a temple, or a façade. But where objects are to be seen successively, it is insipid. In this case variety is required, as in the distribution of houses, a palace, &c. Whoever is unacquainted with designing will use eurythmia improperly, because it looks remarkably well in a drawing where every thing is seen at once.

We also receive pleasure when, on the first coup-d'œil, an object forms an harmonious and perfect whole. Method, unity, simplicity, variety, contrast, and progression, may all be considered to form part of the quality now under consideration.

Method or order requires that every thing presented to the eye should be so placed as to be easily distinguished and imprinted on the memory, that the spectator may be enabled to judge of what is yet to be seen. The palace of the Vatican is continued disorder, on whichever side we turn; and disorder is always offensive.

Unity requires that all the parts of an edifice, and all its ornaments, should have a reference to the principal object, forming together a unique whole. To place an apartment over the entablature of an edifice, is the same

as placing two houses over each other. To use different orders in the same story, is to destroy all unity.

Simplicity is not inimical to richness, but to a superabundance of it. An edifice may be simple, however numerous the ornaments, when these are disposed with economy:—such is the Pantheon.

Without variety, every thing is insipid; therefore, in the various stories of a façade, neither the orders nor decorations of the windows are to be repeated. But variety should not occasion confusion; therefore the ornaments are not changed at every window; and the columns of a portico must not differ from each other. Gothic architecture, from being too much loaded with small and different ornaments, destroys the beauty of variety. A few ornaments, well managed, will produce variety in every production of architecture,—as seven notes are made to produce an infinity of sounds.

Contrast consists principally in the opposition of the heights, projections, and forms, that constitute an edifice, and in the opposition of the plain with the ornamental parts, situation, and colour. Every façade of any great extent should be interrupted by unequal heights, cupolas, pavilions, towers, in the centre and at the angles, according to the quality of the building. This is an excellence peculiar to the Gothic.

In every edifice there should be a progressive increase of beauty. If the auxiliaries are beautiful, the principal façade should be still more so. The portico, vestibule, and court, superior to that; and the staircase and interior arrangements surpass even these.

CONVENIENCE.

Convenience in architecture may be defined, “as the use of the reason in the choice and application of all that

is requisite to render buildings perfect ; that is beautiful, convenient, and strong, according to the various uses for which they may be intended."

Convenience or fitness, which rules every thing, should itself be governed by nature and custom. Nature teaches an architect, that if he intends to study fitness, he must select the most beautiful of her productions, and the most consistent for his purpose ; and dispose them elegantly in his edifices. This is nature in all her beauty ; and, as she is always the same, the links which bind her to convenience, are invariable and universal. Custom may vary according to the opinions of nations who differ in their laws, habits, climates, wants, &c. Hence the Christian churches are different from the Chinese pagoda. But though they differ, both are founded in some measure on nature and reason. And we must never be in opposition to either, though it is not unfrequently the case ; but such abuses ought to be noticed and abolished.

USE OF THE ORDERS TO THE EXTERIOR.

It appears that the orders are principally intended for the exterior of buildings, and that one only is proper : the origin and use of the entablature evince this.

In the same story, one order only can be used of the same size ; otherwise a discordance in the bases and capitals will arise—an opposition of large and small ; hence, that will appear gigantic, this diminutive.

Columns should never be run one into the other :—into this great error Palladio himself has fallen in the Chiericati palace.

Great caution is required in using the orders in plans that are not rectangular, to prevent their plinths, abaci, and entablatures, from looking crooked. This caution

must be doubled, where the plan is curvilinear and concentric; and every thing must be placed according to the rays that proceed from a centre, in which cases the plinths and abacus cannot be square. The point that requires most attention in concentric plans,—as in the piazza Vaticana, where there are four files of columns,—is the judicious arrangement of those columns, so that if the intercolumniations of the interior circumference be just, those of the exterior shall not be too wide.

In curvilinear plans, arches must never be used, otherwise the archivolt will appear useless. The columns must so approximate, that the convex curve of the entablature should appear sufficiently supported on the exterior. The small portico by Bernini, at the Noviziata in Rome, seems to threaten a fall. Finally; in curved plans, several files of columns are not proper, because when looked at from any other point than the centre, they appear in disorder, as in the piazza Vaticana.

The most noble use to which an architect can apply columns, is in an isolated form for porticoes and peristyles: a continued variety of arrangements of different dimensions are produced, as the spectator changes his position; an astonishing grandeur is acquired, and an agreeable relation of divisions.

USE OF THE ORDERS IN THE INTERIOR OF EDIFICES.

If the orders are required in the interior of edifices, it is necessary to use them without a cornice, which indicates a method to carry off the rain. Moreover, the projection of the cornice diminishes the light, which in churches proceeds from above.

In adopting the Doric internally, the ornaments of the

triglyphs and drops must be suppressed, as inconsistent where rain does not fall.

All the profiles must be more delicate than when external; and, to prevent confusion, the plinths to the bases should be expunged.

The exterior must have the same order as the interior, because the latter must be announced by the former; and an exterior story cannot be of a different character from that within.

The orders are not suitable for an inclined plane, as staircases, because the architrave cannot be flat on the capital, or placed horizontally. The same deformity occurs in the plinth of the bases.

BASEMENT

Is a mass of walls, or a continued plinth on which edifices are raised from the ground to protect them from the damp, and to render them level when the soil is uneven, and at the same time to give an air of magnificence. But to produce this effect, it must not be too high, nor ornamented with mouldings, nor cut by doors, which would destroy the idea of that massiveness requisite for the base of a building. Doors should be placed above, with a landing projecting into the street. There may also be windows to light the parts below, which may be cut in the mass without injuring it.

There is another species of basement, in which the whole ground floor of an edifice may be so arranged as to erect an order on it, as a decoration to the principal story. This may be rusticated, and its height must not be greater than that of the order, nor less than the half.

PEDIMENTS.

If the pediment is derived from the inclined roofs of the primitive cottages, it can be no other than the upper finishing of the whole building. Pediment cannot be placed above pediment, nor in the interior of buildings. Their form should be triangular, and not open at top.

Curvilinear or polygonal buildings do not admit of pediments, provided the polygon be not large, or one of its larger sides forming a façade; nor are they placed in edifices covered with a cupola, or on terraces enclosed by balustrades.

The true place for a pediment is in the width of a building, because the span of the roof is represented by it. This may be done in a contrary sense, as in the portico of the Pantheon, where it is not according to the width, but the length; and it looks well, because this portico makes a part of the temple, and in a certain manner forms its width.

Vitruvius observes, that the ancients never used modillions nor dentels in the horizontal cornice of their pediments, but only the simple corona; because in that situation there are neither rafters nor beams: nor were there any used on the inclined sides of the pediment.

The cornices of a pediment require to be differently treated, if we would have them shew their real use. A glance at our buildings will shew us how much correction is required, and how improperly pediments are used.

The best proportion for a pediment is, for its height to be between a fourth and fifth of the base. The height of the tympanum, between a sixth and ninth of the same.

The tympanum, which must always be in a line with the face of the frieze, may be adorned with sculptures, if it be large, but if small, should remain perfectly plain.

Over the three angles of the pediment rise three pedes-

tals or acroterii, to support statues or other ornaments ; sometimes eagles.

In certain buildings, as in churches of several naves, where the centre part rises above the lateral ones, a complete roof is placed over the centre, and a half one to each flank. In such cases, a pediment in the middle, and under this, on each side, a half one, indicating the lower naves, is a Palladian taste, and produces an elegant effect.

BALUSTRADES.

When balustrades are used for a separation, as in chapels, fountains, &c., their height should be relative to that of the elbow of a man, and may be fixed at about three feet. They must be so placed, that the shaft of the column should not be injured, nor the horizontal line broken.

When used for protection and safety, their height must be regulated by the order, and must not exceed four-fifths, nor be less than two-thirds of the height of the entablature over which they are placed.

They must correspond with the character of the edifice in which they are used. Those of double swell are lightest, but the least natural. Those with small bands are bad ; and still worse are they when larger at top than at bottom. The more simple they are the better. Their intervals may be between the half and third of the diameter. Between every sixth or tenth balustrade should be a pedestal or dado, corresponding with the column or inferior pilaster.

The course of the bases or of the rail must not be interrupted, nor project too much.

Statues, vases, and other ornaments over the dados or pilasters, should be as high as the balustrades, or two-thirds.

In inclined planes, balustrades may be fantastically used,

interlaced with irregular or trifling masses, in the taste of Borromini at the Sapienza of Rome. The Borrominesco may be sometimes used with success. Balustrades are not proper over an entablature, which is the termination of a building. If a balustrade is placed above, the building must finish with a terrace, and not with an entablature.

To terminate the pediments of churches with balustrades, is one of those absurdities which speaks ignorance in the architect.

NICHES AND STATUES.

Although niches may be natural, and advantageous to the appearance of a statue, they undoubtedly take much from the pleasure which the spectator would receive from observing every part of the figure.

Of whatever species niches may be, whether arched, rectangular, or mixed, they must have the same relations as the doors and windows; and if placed between these, their dimensions and decorations must be the same, in order that one straight line may run throughout the whole.

The size of the statue depends on that of the niches. In those that are arched, the head of the statue must never be above the impost: in the rectangular, it must be distant from the soffit of the niche about half the head. There must also be the same space between the statue and each side of the niche. When niches are too large, with respect to statues, a plinth may be placed under them.

The depth of niches should be half their width, in order that the statues should stand entirely within; otherwise, when looked at from the flank, they will resemble fragments attached to the wall.

The backs of niches should be devoid of ornament, or the statue will be deprived of much of its effect.

Niches rising from the pavement are preferable to those which are elevated; and when there are several, one above another, the intervals should be at least equal to their height.

ON SCULPTURES.

The sculptures of the orders should be conformable to the qualities and conditions of buildings. How foolish and indecorous would it be to place heads of bulls and pateræ in our churches! The decorative parts of every edifice should accord with its respective character, and every figure be proper for the situation in which it is placed. What then can be more inconsistent than lion's heads in cornices, for the purpose of carrying off the water?

In the various kinds of sculpture applicable to edifices, we must never lose sight of the three following principles: 1st, Parsimony; all the members of an order should not be sculptured; there must never be two carved alike; and intervals are always required. 2d, Intention, as every member or moulding must express its use, or signify a purpose. 3d, Fitness, both with relation to the subject represented, as well as to the character of the order and of the edifice: the ornaments most applicable to mouldings, are derived from leaves, flowers, fruits, and some animals, selected with judgment, which must never be applied to rectilinear members; they must also be regularly disposed, and have a particular correspondence with each other.

The most conspicuous parts should be ornamented, but in white marble or stuccoes, in order that they may be seen distinctly. The veins and colours of marble always create confusion, destroy the contours, and produce an inequality of light. Ornaments of marble should also be in bas-relief; as sculpture, however it may enrich a building, destroys its grandeur.

If architecture requires the assistance of statuary, the

figures must not recline over the archivolt, or the sides of the pediment, nor over the acroterii and balustrades. If the statues represent men, they should not be placed in situations where men could never stand without being in momentary fear for their lives. The most consistent situation is that in which they would place themselves, which is in the intercolumniations, where there are neither doors nor windows; and in order to shew them to advantage, and avoid injuries, they should be raised on a simple plinth, not exceeding the fourth of the height of the statue. It is not improbable that a man should stand on a rock or piece of stone, to make himself more conspicuous, or to procure a better view. But it is very improbable, that a man on horseback should gallop on a pedestal, within a portico, or up a flight of steps. We certainly require some better methods in the placing of equestrian statues. There is not much more consistency in the system of making statues stand on columns.

Architecture seldom requires statues of more than the ordinary height, or a very little more. Those less than nature, should be confined to cabinets; and those greater, for open spaces, squares, and large streets.

Statues should also be analogous to the characters of the orders; if the Doric requires them, a grave style; for the Corinthian, they must be delicate and slight. But whatever their species, they must be instructive, with clear inscriptions; and if raised to illustrious men, clothed according to the prevailing custom of the country.

PAINTING.

If the architect knows how to regulate his work, the painter, by means of his art, will be enabled to make some places appear larger, correct others of their unavoidable deformities, and display a general richness throughout.

In adopting perspective, he will never represent those objects which only please in one point of view, and offend in all others. If, for example, a soffit is painted with the several orders of architecture, and the eye is removed in the slightest degree from the point of sight, all is in confusion and ruin.

And why paint soffits in imitation of vaulting, and the little cupola on domes? thus representing things which cannot be so placed; and even were they consistent, who can look at them without suffering inconvenience in the neck and eyesight? Some light and ærial subject is the only one at all proper, and the walls must accord with the principal painting, by being tinted in a very soft tone.

The better sort of paintings should be applied on vertical walls; and here the architect may have an opportunity of projecting extraordinary designs, converting the sides of a room into a spacious country, or enriched with other objects equally instructive and delightful. The plinth should appear marble, from which should rise columns with landscape in their openings. It appears inconceivable how other pictures can ever be used; and it is astonishing that the antivitruvian arabesques, now so much admired under the imposing name of Raphael, should still be adopted.

If the architect be friendly to the painter, he will employ the various marbles according to the convenience of the subjects. Those of lively colours are suitable to the decorations of triumphal arches, fountains, theatres, and apartments. In temples and altars, those of varied colours are most proper; and in tombs, nothing gay can, of course, be admitted. In combining those of various colours to produce a picturesque effect, we must consider well those that are light, dark, accordant or discordant, and follow the pictorial maxim of never uniting discordant colours, nor of passing into violent extremes.

PART II.

ON PROPRIETY.

THE propriety of every edifice comprehends three principal objects, which are, 1st, its situation; 2d, its form; 3d, the distribution of its parts. Points of the utmost importance and difficulty. There are buildings in which the architect has had his full liberty, uniting every pleasure, convenience, and economy, with beauty of form and situation.

SITUATION.

The conditions necessary for a good situation are the following:

1st, A good soil, salubrious and fertile, neither sandy nor clayey, proper for gardens, exempt from inundations and earthquakes, and distant from stagnant waters and falling mountains.

2d, A wholesome air, which is our natural element, and which we can only have in situations equally open and elevated, where there is a continued renewal by gentle ventilation, not by violent concussions, like that proceeding from chains of mountains.

3d, A sufficient supply of good water is one of the greatest necessities for the support, comfort, convenience, and pleasure of life. To place one's self near unwholesome water, is to venture into the regions of pestilence.

4th, The aspect of edifices must vary according to the variety of place and climate. But provision must always

be made against extremes of heat, cold, violent winds, dampness, and unpleasant odours.

5th, The prospect should neither be too confined nor too extensive, but enriched with the picturesque, and tending to assist the labours of the architect.

6th, Local convenience, which consists in having easy access to all the necessaries and comforts of life, removed from all causes of terror, surrounded by good roads, with a sufficiency of light: a well-selected situation will unite salubrity, convenience, and beauty.

FORMS OF EDIFICES.

The architect may adopt all the figures of geometry, from the circle to the most lengthened ellipsis, and from the triangle to the last polygon. He may also adopt mixed figures, thus varying the form of his edifices to infinity, and always producing something elegant and regular, but never trifling. Variety is invariably agreeable when removed from absurdity, and adapted to the strength and convenience of each building.

The circular has the advantage of being the most graceful and capacious of all the figures, as well as the strongest. But it is disadvantageous, from the quantity of space lost in the angles and internal arrangements, and from the difficulty of distribution of light, the arches, and the intercolumniations. It is therefore most appropriate to those edifices in which no division is required, as in temples, theatres, and piazzas. The ellipsis has less beauty, and is still more inconvenient, but it is useful.

The triangle, which, of all the rectilinear figures has the worst effect in architecture, may be used in some narrow parts of dwellings, for the stairs and returns of the angles, thus enabling the other parts to be arranged with some regularity. Squares, rectangles, and parallelograms, are

proper for churches, polygons, piazzas, and markets; mixed figures, for all other descriptions of edifices.

DISTRIBUTION OR ARRANGEMENT.

Architectural arrangement may be considered in two points of view: one with regard to the ground-plan of an edifice divided into its internal parts; the other, the external division of the elevation or the decoration of the façade. The arrangement, whether external or internal, should be proportioned and agreeable to the character of the edifice. It would be ridiculous to see a large palace divided into an infinity of cells, small orders and windows: equally absurd would be a small house with only one large saloon, and stately ornaments.

The arrangement of the interior should accord with that of the exterior. Façades of two orders are admirably calculated for our churches, which are never divided internally into stories.

In all edifices, the noblest and most beautiful parts should be placed in the most agreeable and advantageous situations, and a perfect whole should be produced, suitable to the purpose for which it may be intended.

For the better understanding of the laws of arrangement, we will consider, first that of an entire city, then the houses of which it is composed.

ARRANGEMENT OF A CITY.

In the rare case of founding a new city, the most advantageous spot would certainly be selected, and a circular or polygonal plan adopted.

A city requires squares of various forms, and streets cutting each other in various directions, and differing in

size and decorations. In this arrangement, there should be quantity, contrast, and even some disorder, to produce beauty and elegance. Extreme uniformity is an essential fault in a city. Whoever has seen one city of Holland, has seen all; and one street is sufficient to give an idea of the whole city.

The plan should be so arranged, as to subdivide the whole into an infinity of particular beauties, each so widely differing from the other, that something new should be continually presenting itself to the eye. Four things are requisite to form a beautiful city: 1st, its entrances; 2d, its streets; 3d, its squares; 4th, its edifices.

1st, The entrances should be free, numerous in proportion to the size of the enclosure, and sufficiently ornamented both within and without. On the exterior should be a long road, with rows of trees on each side, and fountains, terminating in a square before the gate; which should be a superb triumphal arch, giving admittance to another square, surrounded by noble buildings, several majestic streets branching off to various parts of the city, all terminated by some particular object. Such should be the entrances.

2d, The streets are for the purpose of rendering the communications easy, they should, therefore, be numerous, straight, and wide: their width must correspond not only with the size and population of the city, but also with the height of the edifices, and with their own length. The greatest width should be in the centre, where the traffic is greatest. Some should be porticoed, others have footways, ornamented by balustrades and statues, others with parterres; but all clean, and of an easy inclination.

3d, The squares should be numerous and varied in figure and size, not only for the use of the people, but for the salubrity of the city, and to give a more spacious effect.

4th, The beauty of the edifices constitutes the principal

beauty of the streets, squares, and city in general. And who should preside over this department?—Every city should have its academy of architecture, without whose approbation nothing should be erected. The height of the houses should never be more than three stories, their façades regular, and well proportioned, all equally simple, but differing in their style and ornament. Uniformity should be admitted in the squares only.

The public edifices should be so placed as to suit the public convenience. The cathedral in the centre, the parochial churches in the midst of their parishes, the university, the theatres, the tribunals, the academies, and colleges, in the most inhabited parts. The residence of the sovereign at the extremity. These should all be isolated, with squares in front, and streets leading in and out. Thus a magnificent effect would be produced.

But to have a city regular and beautiful, it is not necessary that it should be built from the foundations. Any, however mean and ill formed, may, by degrees, become regular and beautiful; as the various parts are rebuilt and repaired: all that is required is knowledge and inclination in its inhabitants.

The edifices of a city are either public or private.

ARRANGEMENT OF PRIVATE EDIFICES.

PALACES.

Arrangement has always in view, convenience, eurythmia, symmetry, and solidity. Convenience, which consists in various degrees of magnificence, according to the dignity of the proprietor, and in disposing the principal members in a greater or less space, in a variety of forms, gradations of light, &c. Eurythmia requires regularity with regard to the opposite compartments, a relation between the

different parts of a room, and a line should pass through the great hall, generally placed in the centre, so as to enfilade the edifice, and correspond with those in the wings. Lastly, solidity, which requires that the principal walls should be thick in proportion to their height and the weight they have to support, they should unite with the partition walls, so as to form a whole: care should be taken to place these one over the other; that the arrangement of the principal floor should not interfere with any part of the ground floor, especially if the latter be intended for the use of company or parade; also, that the apertures should be sufficiently removed from the angles.

The entrance should always be in the centre of the façade. The vestibule, either simple or with wings, may be variously formed, and solidly decorated with stone. The court following it, porticoed according to the style of the palace. The grand court different, if flanked by smaller ones, for stables, coach-houses, kitchens, &c. It is necessary that all the courts be protected from the sun, and the internal buildings higher than the external, and covered with terraces ornamented with statues, hanging-gardens planted with flowers, to embalm the air, and produce an agreeable effect from the entrance and from the street.

The second floor should be sufficiently elevated to light the parts below, and appropriated to cellars, not to kitchens or stables. The second floor should be made capable of every convenience for domestic comfort, and the state apartments for ceremony.

STAIRCASES.

The staircase of a palace has many requisites, — 1st, situation; 2d, form; 3d, proportion; 4th, light; 5th, decoration; 6th, construction.

1st, The proper situation of a staircase is that where it can be seen immediately on entering the hall. But this is not sufficient, it must be seen to advantage, and have the effect of importance, which will not be the case, if, in order to reach it, we have to cross a court or go round the porticoes. The best situation is in one of the sides of the vestibule, with a handsome decorated approach.

2d, If the form of the staircase is not quadrangular, it is inconvenient; and the principal requisite of a staircase is convenience. Architects have certainly amused themselves by adopting forms the most absurd; the spiral is undoubtedly admirably calculated to produce vertigo: but quadrangular staircases may be diversified into polygons, circular, elliptical, mixed figures. Here we have a variety of elegant forms, without offending against convenience or security; since, whatever form the whole may be, the branches, whether simple or double, will always be quadrangular, and the steps rectangular and parallel.

The staircase must be proportioned to the edifice. In general habitations the length of the steps is not less than 6 feet, and in large edifices not more than 12. At every fifteen or twenty stairs, a space, or landing, is required. The height of the step should not be more than 6, nor less than 4 inches; in the first case the width should be 12, and in the second 16. These relations are founded on our experience of their convenience.

4th, Convenience, security, beauty, all require the staircase to be well lighted. The light should not, therefore, be admitted at the sides, but in front, or from the top, by means of a lantern, which produces also a good effect, both internally and externally.

Neither columns nor balustrades should stand on the steps; these ornaments are only calculated for the landings, where there may also be statues and other sculptures. A more decorative effect is also produced by the staircase terminating opposite the principal door of the

state apartment: to which should be added a sumptuous vestibule. The steps should never be of polished marble, and always in an horizontal position.

6th, Finally, the mechanism shewn in the construction constitutes the principal value of a staircase; the elegance of the vaulting, the cutting of the stone, the fitting and uniting of the whole well together, is requisite both for real and apparent solidity.

APARTMENTS.

The apartments, for convenience, society, and public ceremonies, should be situated on the principal floor, and only differing in their position, size, and number: all should be easy in their communication. An opportunity is here offered for the display of architecture in all its grandeur; in the halls of audience and conversation, in the galleries, academies, museums, and libraries, the architect may shew the most consummate skill and learning, whether he shall adopt the ancient Corinthian hall of one order, or the Egyptian of two, the triclinium, or copy the various models of theatres and amphitheatres.

Finally, in the chambers care must be taken to avoid all confinement, narrow corridors, &c., so that the air may be continually renewed.

DOORS AND WINDOWS.

The form of doors and windows should be agreeable to the proportions of man, for whose use they are intended: and man being from two to three times higher than he is wide, when holding his arms in an easy position, it follows, that the figure of the doors should be rectangular, and of the above proportions. Large gates,

as those of cities and principal doors, may be arched, for greater strength; but no good reason can be assigned for diminishing the doors and windows.

The width of large doors and public gates may be from 8 to 20 feet, those of moderate size from 4 to 12 feet, and the smaller ones from 4 to 6 feet. The height must be regulated by the size of the edifice.

Their decoration consists in their jambs being more or less ornamented. Columns are rarely used to internal doors and windows.

Several doors enflading should be in one right line; the windows equal in their distances, and proportioned to the doors. The width of the large windows should not be more than 6 feet, and that of the smaller ones not less than 4 feet. In every façade the solid should be greater than the opening, and weight should be placed on weight, the void over void.

CHIMNIES.

Whoever is desirous of having chimnies free from smoking, retaining all the heat, and consuming a small quantity of fuel, will consult Franklin, who has applied philosophy to the conveniences of life with admirable clearness and simplicity. Their best situation is opposite the windows, and their most beautiful decoration a simple jamb, supporting a plain polished cornice.

COMPARTMENTS.

Compartments, of whatever description, whether in pavements, in the squares of façades, the internal coverings of walls, soffits either level or vaulted, or in roofs, should correspond with the quality of the edifice, its form

and material. Generally speaking, their design should be large, in proportion to the spaces for which they are intended. A paving of delicate Mosaic is consistent for a boudoir, not for a saloon. How offensive are those compartments of trifling ornaments in the piers of the lesser naves of the stately St. Peter's. Fish and quadrupeds are improper in a pavement, where they would not be placed in reality; equally absurd is it to see lions and dolphins in soffits and on the sides of roofs.

FACADES.

The façade is to an edifice what the physiognomy is to man; and it is most unfortunate when, in either case, the exterior is enigmatical, or contradicts the quality of the interior. Façades may be considered perfect, when in their decoration, symmetry, and eurythmia, they adequately express the internal distribution and construction, suitable to the nature of the edifice. Various façades should express the various purposes of the interior of buildings.

In royal palaces the façades should be ornamented either with one order of architecture to the state floor, supported by the ground floor, as a sub-basement, or with two orders, one on the ground floor, having the upper entablature crowned by a rich balustrade. Other palaces should be decorated according to the rank of the personages inhabiting them. Between the splendour of this species of building and the simplicity of private houses, there is a medium style of decoration, the Ionic for citizens of the highest class, the Doric for the façades of merchants; even in habitations of less importance there should be nothing offensive, and it would cost but little to decorate them in a style, announcing both taste and elegance in

the interior. The beauty of a country is much improved by splendid works in architecture.

GARDENS.

The Chinese taste of giving to their gardens the simplicity, and sometimes the caprices of nature, is rapidly producing a disgust for our unnatural and absurd style. The English no longer have recourse to France and Le Notre, but to China; and Whately has prescribed laws which banish every affected regularity, and produce scenes of enchantment, wildness, and sweetness, which continually surprise with some new delight. In fact, he presents us with a perfect picture.*

ARRANGEMENT OF PUBLIC BUILDINGS.

It is easy to decide on the situations most proper for public buildings of a great city, as Tribunals, Colleges, Universities, Exchanges, Baths, Theatres, Churches, &c., which should all be surrounded by large squares, and opposite to principal streets. With regard to the internal arrangement, as well as the external, we have elsewhere said, *that* all should correspond with their respective uses, as is amply detailed in the “Principles of Civil Architecture.”

* Since the time Milizia wrote, the style of Landscape Gardening in England has assumed a character totally different; and, since Whately's book, the subject has been much discussed, and the works of Kent, Brown, and others, and the publications by Price, Knight, Repton, &c. have introduced a style more accordant to the pleasing and endless varieties of Nature, and which, over all Europe, has obtained the name of “English Landscape Gardening.”

Hospitals, Cemeteries, Lazzaretti, Shambles, Magazines, and Manufactories of every description, should be without the city, in open spaces, and well ventilated.

CHURCHES.

Architecture ought to be displayed with the greatest sublimity in churches, which neither in the exterior nor interior should have any thing in common with other buildings. Suppose a church at the extremity of a large wide street, in the midst of a regular square, it should be constructed of large stones well united, and its solidity should be conspicuous and striking. Its exterior decoration one single order, regularly placed on a basement of a few steps: the intercolumniations equal, the entablature running all round without any projections, and one pediment crowning the august front. The rear should be ornamented with the same order, and in the centre of the pediment an arrangement for the clock and bells. On entering, the whole should present itself at one view. There should, therefore, be neither recessed chapels nor large piers; but isolated columns of the same order with the exterior, which give a species of life, and present at every step a delightful variety of view. There must be no cornices, and every altar beautiful only from its simplicity, not having columns on pedestals, supporting a pediment or roof, cupolas, mausoleums, or any thing that can detract from the general harmony.

PART III.

ON THE SOLIDITY OF BUILDINGS.

Without solidity—beauty, magnificence, and convenience, avail but little. We seek for durability in every thing, how much more necessary is it then in buildings, which are erected at so much expense and trouble? On this very important subject we shall only here make some general observations.

A fabric may be considered solid when it has lasted for any length of time and is free from both injury and decay. Against this desirable quality there is continual warfare, from heat, cold, damp, weight, and wear; and our aim should be, to avoid the effects of these various actions as much as lies in our power.

Every edifice must be considered as a whole, composed of various parts united together. These parts are called materials, and are either stones, bricks, cement, sand, wood, or metals. The strength of the whole building depends on the particular strength of each, and the uniting of all these component parts: hence the duration of every building results from two things,—1st, the proper choice of the materials; 2d, of their proper employment; that is, of the true construction of the whole.

1st, The choice of materials, which varying according to different countries and districts, requires great knowledge in the architect. He must be well acquainted with all their qualities and differences, and be able to select those which best suit his purpose; nor will he be content with the popular opinions which are too commonly falla-

cious; but he will make useful experiments, so that at a glance, or a touch, he will be enabled to form a correct judgment, and detect every fraud: yet the greatest requisite in the character of an architect is *that true philosophy* which will teach him to be an honest man. Woe to him if he would be a Midas.

2d, The proper use of materials depends principally on three things:—1st, the quality; 2d, their distribution; 3d, their mutual connexion or construction.

1st, The quantity, of which sufficient should be used to render the building solid. An ill placed economy produces weakness, and consequent ruin; an excess of quantity causes needless expense and weight, and oftentimes offends the eye.

2d, All the materials have not the same degree of resistance; they should, therefore, be so arranged in the different parts of the edifice, that the weakest should be where the least strength is required, and the strongest wherever there is the greatest weight. Another point, requiring the discernment of the architect is, that materials of the same kind are not all equally good for every sort of work. Having thus discovered the secret of putting every thing to the best account, he will avoid superfluous expense, and will give to all their proper effect.

3d, As every building is the result of various parts united together, it is most necessary that there should be a mutual connexion between those parts and the component materials. Some parts are essential; as the foundations, the walls, the roof; others secondary, as the pavements, the ceilings, and the ornaments. Some support, others are supported, and so on. The best skill consists in so uniting these, that throughout there should be a proper equilibrium of strength.

In every edifice, then, it is necessary to distinguish between the parts supported and those supporting, and

there will always be a proper degree of solidity, if the latter be proportionably superior to the former. If we consider a wall detached from any other building, it forms at once its own pressure and support, because the upper courses rest on the lower, and thus are supported. If we examine a house, we find it composed of several walls, vaults, floors, and roofs; the latter are the weights of the edifice which the walls support; and the architect, in forming his plan, has to calculate the pressure, and regulate the strength of his supports accordingly.

There are weights which act vertically, as masses of walls rising direct from the foundation. Other weights are distributed here and there, to the right and left, as in vaultings; the gravity of which act in oblique lines. To calculate their pressure their curves must be measured, and the less the rise of the arch, the greater will be the thrust. Finally, there are the floors and the roofs, the pressure of which is vertical and in right lines, and the thrust in oblique lines. All this requires great exactness of calculation, consequently a thorough knowledge of mathematics.

It is always dangerous to touch the essential parts of an edifice once constructed. The thickness of the large masses is often deceptive; and it may be thought excessive, and that to remove a small portion cannot be productive of much evil; but the mischief is often suddenly and bitterly felt.

If for the third part a knowledge of physics and mathematics is required, for the second we must have a genius fruitful in inventions, and perfectly acquainted with all civil usages: as for the first, a purity of taste is necessary, acquired by observation and reason. The director of a building may, therefore, be considered a great man, who places himself at the head of a multitude of workmen executing a variety of arts subservient to his purpose.

Hence there is much reason in applying to the art of building the pompous title of architecture, that is, the "directing art to all others."

Many able men have written upon architecture, and have very properly brought it to a science. Whoever exercises, or intends to exercise it, should study these works, if he wishes to produce admirable designs for posterity, which is the supreme tribunal, whence he will receive impartial applause or condemnation. Philosophy, that is, the power of reasoning on every subject, which is become so general since the middle of the last century, has been introduced into the fine arts, and applied to the analyzing the truth of that sentiment we call taste. Thus philosophy, illumined by metaphysics, which is only the science of first principles, (every art and science having something metaphysical, their first principles being founded on constant and general observations), distinguishes the principles of the general and common taste of all classes, from those which are modified by the character, genius, and sensibility, of particular nations or persons. The architect will thus distinguish real beauty from that which is so by consent, he will study the impression of these sentiments on others, and make it his pleasure, by the means of mild and unostentatious reasoning, to evince that he has received from Nature, or from study, a more correct mode of thinking and feeling.

I have endeavoured myself to take advantage of the best information contained in the various authors on architecture, and having compared them with the edifices, ancient and modern, have collected all my observations in a treatise, entitled "the Principles of Civil Architecture;" divided into three parts; the first on the beauty, the second on the convenience, and the third on the solidity of architecture.

This work was printed first at Genoa, and a sketch of the same is given in the *Essay on Architecture*, prefixed to the "Lives of the most celebrated Architects," in the first edition at Rome, 1768.

The object of this work is to treat upon the History of Architecture, and if it presents a faithful picture of the varieties in human intellect, what a pleasing and instructive spectacle it offers to us. If the history of literature were more attended to, sciences and arts would make more rapid progress. Each professor would then see the features of his own mind portrayed in the various examples of his predecessors, and he would then be desirous of adding something to the treasures of preceding centuries, and each science would, like astronomy, be daily enriched with new and interesting observations. Had the ancients, instead of erecting statues to their great men, given us pictures of their minds, we might have had useful memorials, and should have been better informed on the principles, the progress, the revolutions of the arts and sciences, and on the discoveries of remote ages; a species of history, much more interesting to us than that of battles, wars, heroes slain, and useless dates: but we cannot expect such histories without the guidance of philosophy. History teaches what men have done; philosophy goes further, she examines, and points out to us what we ought to do.

The history of artists is contained in their works. In describing their architectural productions, it is necessary to shew the means they used to surmount obstacles and arrive at excellence: and here we have sometimes a painful task. We are all liable to err, which, however melancholy to reflect on, is sometimes useful to a mind capable of deriving improvement from reflection.

In every edifice here described we carefully distinguish between the truly excellent, the good, the me-

diocre, and the bad: all must endure the touchstone of our principles, or we shall be circulating as it were a base coin.

It behoves us, more particularly for the sake of youth, to expose the faults of great artists, as being generally less easily discovered, and more dangerous, from the authority which their elevated names impose; the splendour of which, like that of the sun, almost overpowering these spots; and authority has such power that it will convert even the drunkenness of Cato into a virtue.

The highest praise to which a reasonable man can aspire, however great his pretensions, is to be admired much and blamed but little. He who seeks only to discover the faults of others, deserves the punishment inflicted by Apollo on those who made him an offering of the errors of their fellow-creatures; viz. to peel a heap of grain and keep the husk for themselves. Gold itself is never without dross, and to separate the one from the other often costs more labour than it is worth. It would be cruel to caress the raven and neglect the dove. There is more talent in pointing out virtues than defects. While condemning any architectural vices, we at the same time must respect the architect.

“ *Parcere personis, dicere de vitiis.* ”

The limits between criticism and sarcasm are not always distinguished: offended vanity often discovers satire where none is intended. There is a copy of the “ *Lives of the Architects,* ” with marginal notes by the celebrated Luigi Vanvitelli, who had written on the first page, “ The author of this satirical work is Francisco Milizia. ”

But, wherever the author has discovered faults, he can with safety affirm that they gave him pain; and if he has exposed them, it is only with a hope of preventing, if possible, their recurrence and increase.

With an undeviating regard for the public benefit, he has thus endeavoured to compile a History of Architecture, hoping that, after describing its principles, progress, and changes, and detailing the means most conducive to its improvement, it will be long preserved from degradation, and be continually improving in strength and beauty.

The highest praise to which a treatise on architecture is entitled, however great its merits, is to be distinguished and found useful. It is the wish of the author to cover the field in others, hereby a the purchase of the by Apollo on those who made him see nothing of the error of their fellow-creatures; not to pass a heap of gain, and keep the hawk for the sparrow. It is never without loss, and to acquire the one, it is other often costs more labour than it is worth. It would be cruel to cause the fawn and neglect the deer, when as more talent in pointing out virtues than defects. While condemning any architectural vice, we at the same time must respect the architect.

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OF THE
ANCIENT ARCHITECTS.

BOOK I.

CHAP. I.

OF THE ARCHITECTS BEFORE THE TIME

OF PERICLES.

450 Years B.C.

As the Chaldeans boast of having been a nation 500,000 years, it is not an easy task to ascertain either the number or names of their architects.

King Ninus* founded the city of Nineveh of a rectangular form, 74 miles in circumference; and surrounded it by a wall of sufficient width to admit three chariots abreast: it was 100 feet high, and defended by 1500 towers, each 200 feet in height. Alberti endeavours to impress the belief that this work was executed in fifteen days, which seems impossible. The queen Semiramis,† not satisfied with this immense city, built another near it, which she called Babylon, of a quadrangular form: each

* Diodorus Siculus, lib. ii. cap. 1. (Ann. Mun. 2737, Usher Ann.) Before Christ 1950 years, or about the time of Abraham's birth, according to most chronologers. Nineveh is supposed by Poccocke to be the modern Mousul.

† Semiramis, according to Usher, lived 1215 years before Christ.

side was 15 miles long, and had twenty-five gates of bronze (see Isaiah). From each gate a street was formed to that opposite, making altogether fifty streets, each 150 feet wide; which crossing at right angles divided the city into 676 parts. Each quarter had houses of three and four stories in height, all beautifully ornamented; the middle courts were formed into convenient and delightful gardens. The walls* were built of large square stones, cemented by bitumen; their height was 350 feet, their breadth 87; defended by 250 towers. The river Euphrates ran through the middle of the city, over which was a bridge of stone, † 5 stadia long, and 30 feet broad, cramped together by iron, and covered with beams of cedar, palm, and cypress. At each end was a royal palace: the smallest was 7 miles in circumference, and both contained hanging gardens. These must have been extraordinary efforts of industry, if we credit the accounts given of them, viz. that they were raised on a square bank of earth, cut into terraces resembling an amphitheatre; the highest being on a level with the walls of the city: the whole supported by internal and external walls, the latter

* Herodotus, lib. i. sect. 178. "The wall is 200 royal cubits high and fifty wide." Further, in sect. 179, he says the city was surrounded by a trench or ditch, full of water, and that the earth dug out was made into square bricks and baked in a furnace, being first of all laid in heaps till a sufficient quantity was obtained. They used for cement a composition of heated bitumen, which, mixed with the tops of reeds, was placed betwixt every thirtieth course of bricks. Having thus lined the sides of the trench, they proceeded to build the wall in the same manner. Pliny, lib. vi. cap. 26, says, that Babylon contained on each side 60 Roman miles. Diodorus Siculus probably gives the fullest and best account of the city of Babylon, lib. ii. cap. 1: he quotes the authorities of Ctesias the Cnidian, and Clitarchus, who accompanied Alexander into Asia.

† Herodotus, lib. i. sect. 186, says, that "this bridge was strongly compacted with iron and lead; over which the inhabitants passed in the day-time by a square platform, which was removed in the evening to prevent acts of mutual depredation. When the bridge was built, the river

22 feet in thickness. These terraces were formed by square stones, 16 feet long and 4 broad, on which was laid a stratum of reeds, cemented together by bitumen; then two courses of bricks laid in mortar; afterwards a covering of lead; and finally a stratum of vegetable mould sufficiently deep to admit the largest trees, and every variety of plant and flower, which were watered by an aqueduct supplied from the river. We cannot decide whether this account be true or false, nor can it in any way benefit the arts. In this city was also the temple of Jupiter Belus,* a quarter of a mile in height, and the same in width; consisting of eight square towers piled on each other, gradually decreasing in width, and rendered accessible by an external winding staircase leading to the summit. This temple contained many colossal statues of massive gold; the most splendid was that of Jupiter, 40 feet high, holding a sceptre composed of precious stones. Before it was an altar also of gold, 40 feet long, and 15 broad, the vessels belonging to which were all of the same metal, and of amazing weight. It has been imagined by some that this edifice was the remains of the tower of Babel, supposed by St. Jerome to have been 4 miles high; and Adoni has stated it to be 5000. Without the walls of Babylon a square lake was dug, on

Euphrates was turned into a canal, cut for the purpose." This bridge consisted only of large masses of stone, piled upon each other at regular distances without arches: they were made to communicate by pieces of timber thrown over from one pier to another.—See Dr. Richardson's very interesting "Travels along the Mediterranean," vol. ii. p. 147, where is a dissertation on the passage or tunnel of Semiramis.

* Herodotus, lib. i. sect. 181, says, "the Temple of Jupiter Belus has huge gates of brass, which are still to be seen. It is a square building, each side of which is of the length of two furlongs. In the midst a tower rises of the solid depth and height of a furlong; upon which, resting as a base, seven other turrets are built in regular succession."

each side 34 miles long; the whole of the interior was lined with bricks, covered with pitch: its depth was only 35 feet. This lake received the overflow of the waters of the Euphrates; for which purpose many canals were also cut. Some imagine it to have been made by Semiramis, to divert the course of the river, at the time she constructed a subterraneous passage* from one palace to the other: this passage was 20 bricks in thickness, 12 feet high, and 15 wide.

Semiramis founded cities and palaces throughout every province of her vast empire. The epitaph of Sardanapalus says, "I built Tarsus and Anchiale in a day, and am now no more." For these and other wonders the Babylonians have been reputed great architects, learned in the arts and sciences, and endowed with the faculty of invention: some have said, that Ninus, Belus, and Semiramis, not only ordered these surprising things, but designed and superintended the execution of them. If all this be true, how insignificant is our knowledge of art when compared with theirs! Others have suspected these wonders to be fables invented by the Greeks: but their supposed antiquity, and many accounts on which we rely, are not so well corroborated as the above.

The Egyptians, who in comparison with the Assyrians were but children, since they only assumed 30,000 years of antiquity, equalled in magnificence the rest of the ancients. Thebes,† which was built after the style of Babylon, was so populous, that in times of war 10,000 warriors issued from each of her 100 gates. The city, therefore, must have contained 1,000,000 soldiers; consequently, at least a population of 5,000,000; and yet the whole of Egypt never contained more than that number; but this is a trifling difficulty to surmount. Memphis,

* Diodorus Siculus, lib. ii. cap. 1.

† Ibid. lib. i. cap. 4.

also, did not yield to Thebes, either in grandeur or magnificence. From these traditions we turn to the vast pyramids* which still exist, those certain proofs of despotism. Near them was a bridge, 5 miles long, 60 feet wide, and 80 feet high, of polished stone, on which were sculptured a variety of animals.

The palace in the vicinity of the cataract, near the ancient Siene, had four grand colonnades, the columns of which were placed together, three and three, in the form of a triangle, on the same pedestal; over the capital of each triangle was a sphinx and sarcophagus placed alternately. There were not less than five or six thousand of these figures, each cut from one block, and 70 palms high, besides many other gigantic statues. There were also innumerable grottoes cut out of the rock; the mass above was supported by prodigious square pillars, left for the purpose; the whole were ornamented with sculpture, and sufficiently large to admit 600 horsemen ranged in order of battle; these led to the catacombs containing the mummies. Another palace† near to Dendera, (not improbably the Temple of Serapis,) was of a surprising height, and supported by porticoes of granite columns, 120 feet high, of such thickness that eight men could scarcely span them; the capitals were composed of four highly decorated female heads, the pavement was formed of stones of a large size. The Egyptian temples had in front a dwarf wall, adorned with sphinxes; then a portico or propyleon, usually two, but sometimes three; and finally

* Diodorus Siculus, lib. i. cap. 5. Herodotus, lib. ii. cap. 101, Josephus, Antiq. Jud. lib. ii. cap. 9, mentions these pyramids. At Memphis, about thirty pyramids still exist, and there are traces of many more; the stone with which they are built is calcareous, fine-grained, of a light grey colour, easily cut, light, and porous; the masonry laid in mortar.

† See Dr. Richardson, vol. i. p. 186, who describes the present state of most of these buildings.

a vestibule with a well-proportioned cell. Equally wonderful was the artificial lake of Mœris,* 450 miles in circumference, and 50 braccia deep; with innumerable canals and reservoirs to receive the inundations of the Nile. Of the Labyrinth† we shall speak hereafter. It is remarkable that not one architect has ever been named among the accounts of these prodigious efforts.‡ However stupendous these and other works may have been, it is evident that the Egyptians had only made the first step towards decoration. Their columns were simply imitative of the trunks of trees, the capitals were unornamented square stones; and frequently they united several columns, for the purpose of supporting a great weight, but without attending to the refinement of architecture.

The Hebrews left Egypt ignorant of its architecture, although they were servilely employed in the erection of its principal buildings. Bezaleel and Aholiab, nominated by Moses to construct the tabernacle, were, by the Almighty Architect of the Universe, “filled with wisdom, understanding, and knowledge, to devise curious works in gold, silver, and brass, in cutting of marble and precious stones, and in carving of wood:” all the artisans employed in this vast work were likewise by Divine inspiration endued with knowledge, that they might follow the orders of the two principal architects. But the Hebrews were never inclined to the arts and sciences,

* Herodotus, lib. ii. cap. 149.

† Ibid. cap. 148.

‡ Upon the whole, there are yet, it is said, in existence, in Upper Egypt, five palaces and thirty-four temples: the most ancient have been constructed chiefly with sandstone, and a few with calcareous stone. Granite was only used in obelisks and colossal statues. After the seat of empire was removed to Memphis, granite was made use of: immense masses were extracted and carried from Elephanta. The sanctuary of Minerva at Sais, and Latona at Butos, said to be cubes of 60 feet, were floated 600 miles from Philæ and Elephanta.

nor were they improved by the instructions of these two masters of architecture and sculpture; therefore Solomon, when about to erect his famous temple, sent to Tyre for the architect Hiram, "who was filled with wisdom, understanding, and knowledge, to work all works in building and sculpture." Of the magnificence of this temple we are informed in the book of Kings. That it was of the Corinthian order, and Solomon's palace of the Doric, are mere efforts of the imagination; we learn only that the temple was beautiful, and furnished with costly vessels. Josephus makes the columns of the temple 18 cubits high, 4 in diameter, and the capital 5 in height, of the form of a lily; but this corresponds with no order of ours.

We know likewise that it could not be a very large edifice, because, independent of the houses and adjacent buildings for the use of the priests, the sanctuary was only 60 cubits long, and 20 wide; with a portico 10 cubits wide in front, and 20 long. An Hebrew cubit is about 22 of our inches. Hence it is evident that it was of a moderate size; but beauty does not always consist in magnitude.

After the return from the Babylonish captivity, the temple was rebuilt on a more confined scale and in a less beautiful style; and still smaller was the last edifice, which Herod completed in a year and a half, during which time it did not rain a single day: he employed 10,000 excellent workmen, 1000 priests expert in building, and 1000 carts. Josephus also asserts, that this last temple at Jerusalem,* a city two miles and a half in circumference, astonished Pompey, who was born in Rome, and had visited Greece and Asia Minor. The same Herod built other edifices near the temple, in form of castles; but these it is agreed were mostly of wood, as they took

* Dr. Richardson, vol. ii. p. 256.

fire when Titus besieged the city, by which means he rendered himself master of it.

The Persian edifices were of a most extraordinary magnificence; the royal palace at Persepolis passed for one of the seven wonders of the world. The architecture was singular, and of quite a different style from the European. There are still to be seen in the ruins of Persepolis two fluted columns, the bases of which are composed of two large tori, the capitals being equal to half the height of the column, and their form extremely whimsical, bearing no resemblance to any thing with which we are acquainted, except the volutes at the top between a band of clumsy ornament. Serlio considers these columns to have been of the Corinthian order, but his opinion has never been adopted. The palace of forty columns was at the foot of a hill, and was approached by steps divided into two flights, each 27 feet 7 inches long, 14 inches wide, and 4 high; these flights and their landings of large stones were ornamented with columns; they seemed to diverge towards the middle, then converge at the top: the effect is graceful enough. Before the façade were two grand porticoes of columns 39 feet high, with gates, windows, niches, and sculpture of every description: the walls and cupolas of the apartments of this palace were covered with ivory, amber, silver, and gold; there were also a palm-tree and a vine composed of gems.

The Asiatics and Egyptians had erected stupendous monuments, at the time the Greeks were in a state of barbarism. But if the latter were more tardy in giving proofs of their genius, they, by the simple arrangement of their cottages, arrived step by step at a complete system of architecture,—a system which other celebrated nations of antiquity did not know how to practise, even in their most magnificent buildings. Thus the Greeks, more by the

strength of their own genius, than from what they were enabled to observe in Asia and Egypt, introduced a regular style. Dorus, king of Achaia and Peloponnesus, erected a temple to Juno at Argos; in imitation of which, several others were built in Achaia, which were called Doric. But the proportions of this order were not then regulated, the height of the column being less than six diameters. Afterwards a number of Athenians, under the command of Ion,* emigrated to that part of Asia which was called Ionia; they there built a temple to Apollo Panionios, similar to that in Achaia, and made the columns six times their diameter.

TROPHONIUS AND AGAMEDES.

B.C. 1400.

THESE are the first Grecian architects of whom history makes mention. Both are said to have been sons of Erginus,† king of Orchomenos in Bœotia; and if not brothers, were certainly very intimate friends, passing their life together. They erected a temple in honour of Apollo, in a wood, on a mountain near Lebadea, a city of Bœotia, now called Livadea. The enclosure of this temple was of marble, 2 cubits high, on which were several obelisks in bronze. They also built the temple of Neptune near Mantinea, and the renowned one of Apollo at Delphos.‡ Cicero relates that, after having completed this last work, they prayed the god to reward

* Vitruvius, lib. iv. cap. 1.

† Pausanias, lib. ix. cap. 37.

‡ Ibid. lib. x. cap. 5. The fourth temple of Apollo at Delphos is said to have been built of stone by Trophonius and Agamedes, and this was burnt in the first year of the 58th Olympiad.

them by granting whatever was best for man—a sensible prayer;—three days after they were found dead—an admirable reward. Pausanias gives a different account of them: he says, that after having built many edifices by which they acquired great fame, they erected one in Livadea,* where Hyrieus lodged his treasure. The architects knowing for what use the edifice was intended, united certain pieces of marble in such a manner, that they were enabled to remove and replace them at their pleasure. By this contrivance they could enter and return without being perceived. Hyrieus soon discovering that his treasure diminished, laid a snare within the chest which contained it. Agamedes was caught; and Trophonius, unable to disengage him, cut off his head intending to carry it away, rather than subject his friend or himself to an ignominious punishment; but, the earth opening under him, he was buried alive. Here was afterwards the cavern and the so much frequented oracle of Trophonius, enriched with statues, altars, and temples, and where sacrifices and games called Trophoni were celebrated. A similar fable to this is related of Rhamsinatus,† king of Egypt; with this addition, that Rhamsinatus, in order to discover the robbers, had the headless corpse hung up to the walls of the temple, and placed sentinels to observe the countenance and manner of the spectators, with orders to conduct to him those who shewed any grief or distress. This was known to the mother of the deceased, who, almost driven to madness, induced the brother to recover the body, a corpse in Egypt being held in veneration. He then provided himself with asses laden with tubs of wine, and when near the guard, very dexterously upset them, feigning great distress. The soldiers immediately ran to save the flowing liquor; and whilst they were drinking and carous-

* Pausanias, lib. ix. cap. 37.

† Herodotus, lib. ii. cap. 121.

ing, he detached the body of his brother and carried it to the mother, without their perceiving it. The king, more enraged than ever on hearing this, had recourse to the following expedient; he promised to sacrifice the honour of his daughter to whoever would first divulge to her the most wicked and most artful action of his life. The young man in question presented himself, but was provided with an arm lately taken from a dead body; he confessed every thing to her, and she immediately endeavoured to arrest him; but he detached the false arm, and thus saved himself. At this fresh deception the king's fury was changed into admiration, and he promised pardon to the author of so much ingenuity: the young man went boldly to the palace, the king kept his word, gave him his daughter to wife, and made him a person of consequence.

The treasury of Hyrieus was different from that of Minyas, in Orchomenos, which was entirely of marble, in the form of a rotunda, with vaults terminating gradually in a point. Pausanias says, that the highest stone regulated the symmetry of the building, which he describes as one of the wonders of Greece, and the most sumptuous in the world. But this is contrary to the opinions of the Greek historians, who admired the productions of other countries rather than their own, describing with great precision the pyramids of Egypt, and omitting the treasury of Minyas and the walls of Tirynthus, built by the Cyclops,* with stones of immense size, and which are certainly not less wonderful than the pyramids themselves.

* Pausanias, lib. ii. cap. 25.

DÆDALUS.

B. C. 1250.

DÆDALUS was an Athenian of the royal family,* cousin to Theseus, and one of the great personages of those fabulous times which preceded the Trojan war. He erected many buildings in Memphis, so much to the satisfaction of the inhabitants, that they permitted his statue to be placed in the Temple of Vulcan; and afterwards raised altars to him, and paid him divine honours. His masterpiece was the Labyrinth in the island of Crete,† which he constructed to confine the fabulous Minotaur, the famous one in Egypt being his model. This latter was supported by columns of a prodigious size, capable of resisting the effects of time and the violence of men. The arrangement of the work, and the distribution of the parts, were remarkable, it being divided into sixteen principal regions, each containing a number of spacious buildings; consisting in the whole of three thousand apartments, half above the earth and half under, which altogether might be defined an assemblage of palaces. There were also as many temples as there were gods in Egypt, the number of which was prodigious; besides various other sacred edifices, and a number of lofty pyramids. The substructions of this Labyrinth still exist; and not being arched, it is surprising that, with so many stupendous edifices above them, they should have been so long preserved. After passing through places of great extent, the traveller arrived at that part, the different windings of which furnished Dædalus with the ideas of

* Diodorus Siculus, lib. iv. cap. 5. † Pliny, lib. xxxvi. cap. 13.

his Labyrinth. The entrance was by vast halls, then certain saloons, which conducted to grand porticoes, the ascent to which was by ninety steps. The interior was ornamented with columns of porphyry, and colossal statues of the Egyptian gods. This portion only was imitated by Dædalus in his Labyrinth, which was not a hundredth part the size of the Egyptian. That of Crete was, however, very spacious, surrounded entirely by a wall, and divided into a great number of separate parts, having doors on all sides; the number of which must, from necessity, have produced great confusion and intricacy. What would the ancients say, could they see the labyrinths we have introduced into our gardens? That described by Tournefort is very different, and, like a natural conduit, winds in a crooked and irregular way through the whole interior of a hill near Mount Ida.

It is said that Dædalus built many other edifices in Egypt, in Athens, in Crete, in Italy, and, above all, in Sicily,* where he lived for some time in the court of king Cocalus. He was an excellent sculptor; and to him are attributed many inventions in the art of carpentry and naval architecture. It is pretended that he invented the use of the sail, as also the legs to statues, they being before his time nothing more than rude trunks; hence the former were called Dædalian. "If this Dædalus," says Socrates, "whom we look on as our first master, were to return to the world, and to perform similar works to those that now pass under his name, they would render him ridiculous." The same may be said of many ancients whose works we so much esteem; revering them, still we should endeavour to surpass them: the first inventors seldom bring an art to perfection. He who hollowed out a tree to cross a river, did not perfect a

* According to Diodorus he built Agrigentum, and a palace for the king Cocalus: he made also a cave in the territory of Selinus, &c.

galley; nor did he who first piled wood and stone together, imagine a pyramid. Every thing may be accomplished by diligence, since philosophers by the assistance of geometry teach us how to proceed with exactness; and we no longer are contented with galleys, but build vessels of a hundred guns, not pyramids, but Vaticans. Dædalus' most distinguished pupil was his nephew, called by some Calus, by others Attalus; he invented, among other things, the saw and the compass; against whom Dædalus conceived so foul a jealousy, that he killed him. He was father of Icarus, of whom so many stories are told. There were many of the name of Dædalus, who have by some authors been confused and reduced to one, to render the history more wonderful; as from several heroes named Hercules has arisen one whose life is an absurdity: this is the natural result of fable. Our Dædalus rendered himself famous by his knowledge, his misfortunes, his flight, and his evil deeds. Guilty of the murder of his nephew,* he fled to Minos in Crete, where he performed many wonderful things; but convicted of a new crime, he was with his son cast into prison, from whence he escaped into Sicily, to king Cocalus, who with his court was so delighted with his abilities, that in order to preserve so great an artist, he entered into a war with Minos, who demanded that he should be given up.

* Diodorus Siculus, lib. iv. cap. 5. Dædalus, from rage and frenzy, murdered Talus, his sister's son. Talus for ingenuity excelled his master, and invented the potter's wheel; he got likewise a serpent's jaw-bone, and with it sawed a piece of wood asunder; then, in imitation of the teeth in the jaw, he made the like in iron; so he found out an instrument for the sawing of the greatest pieces of timber. He invented also the turning-lathe, and many other tools for the use of artificers; upon which account he was in great esteem and reputation.

ERYSICHTHON.

ERYSICHTHON, the son of Cecrops, began the Temple of Apollo in the Isle of Delos, which was afterwards finished at the general expense of Greece, and became one of the most superb edifices in the universe. It contained, among many other costly things, an altar* which deserved to be considered among the wonders of the world; it consisted of the horns of different animals, joined together without any apparent ligature.†

EURIALUS AND HYPERBIUS.

Two brothers, who, according to Pliny,‡ were the first in Athens who made bricks, and built houses; the primitive habitations being merely caverns. But the learned say, these personages, like other pretended inventors of the arts, whom Pliny mentions, were only fictitious and symbolical names.

Eurialos signifies *space*, and hence expresses a person, who before he invented the art of building lived in the

* Strabo, lib. x.

† The trunk of the famous statue of Apollo, mentioned by Strabo and Pliny, is still an object of great admiration to all travellers. See Plutarch (in Nicias) for an account of the palm-tree, &c. set up by Nicias, which being blown down, destroyed the celebrated statue set up by the Naxians. Many remains of broken columns, architraves, capitals, &c. remain to this day in a confused heap.—TOURNEFORT'S *Voyages*, tom. i. p. 342.

‡ Pliny, lib. vii. cap. 56.

open country. *Hyperbius* denotes one who lives on high and above the ground, that is in a house. The inventor of mortar was called *Dokio*, son of *Cælos*; but *Dokios* signifies *cement*, and *Cælos* a *cavern*. *Cynarus* (the action of fire,) son of *Agriopus*, invented tiles at *Cyprus*, and the fusion of metals. *Danaus* is made to come from *Egypt* into *Greece*, to sink wells. *Daneion* signifies *borrowed*; and anciently, *Athens* and *Argos* had only one well, which belonged in common to the two cities, the one borrowing water from the other. *Cadmus* invented, at *Thebes*, the cutting of stone; *Thrason* (enclosure) was the inventor of walls; the *Cyclops* (a circle) invented towers and fortresses.

It is not unlikely that the above names, as well as many others given to the first inventors of useful things, were ideal. It is difficult to know who were original discoverers, few having completed a work entirely; an assemblage of trifling inventions, produced by many hands, is often made, and perfected by an individual who is perhaps called the inventor. And little do our modern projectors imagine, they are constantly reproducing what was done centuries ago.

HERMOGENES.

WE know not at what precise time this architect lived; he was a native of *Alabanda*,* a city of *Caria*, in *Asia Minor*. He built the Temple of *Bacchus*† at *Teos*; his

* *Vitruvius*, lib. iii. cap. 1.

† *Ibid.* lib. iii. cap. 2. The Temple of *Bacchus* at *Teos* is said by *Vitruvius* to have been octastyle, pseudodipteral.

first intention was to use the Doric * order; but although the marbles were cut, and every material prepared, becoming embarrassed by the difficulty of attending to that rule, which obliges the triglyphs to be over the axis of the columns, the metopes square, and moreover the triglyph at the angle to be placed at the extremities, † he changed his intention, and used the Ionic. It was octastyle and monopteral, that is, without any walls to form the enclosure of the cell. ‡ The remains || are still seen, and have been accurately measured and delineated by Mr. Revett and other artists, sent out by the English Dilettanti society, (see *Ionian Antiquities*). The bases of the columns are without plinths, and the *outer* capitals have angular volutes.

In Magnesia, § a city of Asia Minor, he erected a temple to Diana, likewise of the Ionic order, pseudodipteral, that is, *false double-winged*; consisting of eight columns in front, as many at the posticus, and fifteen in the flank, comprising the angular ones: thus the effect on looking at the façade was that of a temple with double wings, though, in fact, pseudodipteral, having simply the outer range of columns. The distance from the columns to the walls of the cell was two intercolumniations, and the diameter of a column. Vitruvius praises Hermogenes exceedingly for this invention, and with reason, for expense and

* Vitruvius, lib. iv. cap. 3.

† The metopes which adjoin the angular triglyphs are not square, but longer by half the breadth of the triglyph.

‡ Lib. vii. preface. Vitruvius alludes to Hermogenes having written on the monopteral Temple of Bacchus at Teos.

|| The lower diameter of the columns is 3 feet 3 inches 6-tenths, but the height is not given; this temple is not at all fully measured, as materials do not remain to admit of it: the architrave is 2 feet 5 inches 4-tenths high; the fragment of a lion's head, and a piece of ornament, is all that remains of the cornice.—*Antiquities of Ionia*, vol. i. p. 8.

§ Vitruvius, lib. iii. cap. 1, 2.

labour are spared, and there remains a larger space as an ambulatory;* and the appearance is also rendered equally majestic, as if the side had two separate ranges of columns. Hermogenes made many other discoveries, on which he wrote a treatise,† existing in the time of Augustus, which acquired him the title of the most celebrated architect of antiquity. Vitruvius calls him the father of pure architecture, to whom we are not only indebted for the invention of the pseudodipteral distribution, but also of the greater part of those other arrangements by which its original rudeness and simplicity were polished and enriched.

RHÆCUS AND THEODORUS.

RHÆCUS ‡ was of Samos, || and, with his son Theodorus, rebuilt in that place the famous Temple of Juno, § erected at first by the Argonauts, ¶ and afterwards burnt by the

* Vitruvius, lib. iii. cap. 2.

† Ibid. preface to book vii.

‡ Herodotus, lib. iii. cap. 60, says, “Rhæcus was son of Phileus, and that this temple exceeded in grandeur all that he had seen.”

|| Vitruvius, lib. iv. cap. 1, is of opinion that Samos, and the thirteen towns of the Ionian confederacy, were built by Ion the Athenian, who gave his name to the country of Ionia.

§ The Heræum, or Temple of Juno, appears to have been a decastyle and dipteral temple, like that of Apollo Didymeius: the whole length appears to have been 344 feet, and in front, 166 feet; the diameter of the columns belonging to the outer peristyle is 6 feet 5 inches 4-tenths, but no satisfactory idea can be formed of the plan.—*Antiquities of Ionia.*

Rhæcus was not only a skilful architect, but he farther invented, in conjunction with Theodorus of Samos, the art of making moulds with clay. See Tournefort, *Voyage au Levant*, vol. i. for the present description of Samos.

¶ Pausanias, lib. vii. cap. 4.

Persians. We learn from Vitruvius, that in his time there existed a description of the temple by Theodorus, saying that it was of the Doric order, together with an account of the manner in which the whole was constructed.

This temple was decorated with a multitude of paintings, excellent sculptures, and a variety of rich ornaments. There were galleries adorned with antiques of great value, and an ample court for statues, among which were three of colossal size on one base, the work of Myron.* Marc Antony carried them away, but Augustus restored to the Samians those of Minerva and Hercules, contenting himself with sending that of Jove to the capitol. Verres, on his return from Asia, sacked this temple and carried away its most valuable treasures, and, under Pompey, the pirates completed the spoliation.

M. de Tournefort, towards the end of the last century, found remaining of this once stupendous edifice only two fragments of columns, and some marble bases. Some years before, the Turks, imagining that one of the bases was full of gold and silver, attempted to blast it with gunpowder, the pieces of which he saw. The same Theodorus, in conjunction with Zmilus and Rholus, constructed a labyrinth at Lemnos, † supported by fifty columns of an immense size, a work so well contrived, that Pliny prefers it to the labyrinth of Candia, and even to that of Egypt. These fifty columns were so well poised on their axis, that a child could turn them whilst the artificers worked them.

* Origen, lib. iv. contra Celsum. "The amours of Jupiter and Juno were painted on the ceiling of the temple, and represented so naturally, that Origen reproaches the Gentiles with exposing them to the eyes of the multitude."

† Pliny, lib. xxxvi. cap. 13. Zmilus, Rholus, and Theodorus, were the architects to the Labyrinth in Lemnos.

In Lacedemon, Theodorus erected an edifice, "said to be to Shadow,"* which was probably called so from its fine portico, to which was suspended the lyre of Timotheus of Miletus, who was punished by the Lacedemonians for having added four chords to the seven of the ancient lyre. Theodorus was eminent in sculpture, and to him is ascribed the invention of the rule, the level, the lathe, and the key; likewise that of melting iron and casting it into statues. But some have doubted this assertion of Pausanias.

EUPALINUS,

THE son of Naustrophus of Megara, flourished about the same time, and rendered himself celebrated by the aqueduct that he constructed at Samos. This work was regarded by the Greeks as a miracle, on account of the length of way that was opened through a mountain† for its passage. He also cut through a mountain, at the same place, for the length of 7 stadia, to make a road 8 feet high, and equally wide, bounded by a canal 30 cubits

* Pausanias, lib. iii. cap. 12, a building called Scias, was the work of Theodorus the Samian, &c.

† Herodotus, lib. iii. cap. 60, says, this way through the mountain was 7 furlongs in length, 8 feet in breadth, and as many in height. By the side of this, is an artificial canal, which, in like manner, goes quite through the mountain; and though only three feet in breadth, is 20 cubits deep; this, by means of pipes, conveys to the city the waters of the copious spring. Tournefort, Voyage au Levant, says, the spring which tempted the Samians to undertake this work, is still to be seen at Metelinous.

deep, and 3 feet wide, which served to conduct by various tubes the water to the city. There was also a remarkable mole, 120 feet high, which advanced 2 stadia into the sea. The third wonder of Samos was the Temple of Juno, the largest that has ever been seen, according to Herodotus. The ruins (according to Tournefort) are still remaining, about half a mile from the sea.

PTERAS.

IT is pretended that the first temple dedicated to Apollo, at Delphos,* was formed of branches of laurel cut from a tree growing at Tempe: it must then have resembled a cottage. Pteras constructed another in a better form and as *Pteras* signifies *wings*, it was said to be raised by bees, from wax and wings. Pteras, to prevent a like fable, added a letter to his name, which he gave to a town built by him in Crete, called Aptera. An architect who builds a city with ability, may be allowed to give his name to it. This temple was afterwards built of brass. One so constructed would be a wonder amongst us—not so with the ancients. Acrisius had a brazen chamber made for his daughter, but we do not learn for what purpose. At Sparta, the famous Temple of Minerva was called *Chalciæcus*, from its being built of brass. The grand and magnificent *Temple of Justice at Rome* astonished every one by its brazen ceiling. With all our skill, we can only use brass and bronze for instruments of destruction, or for culinary vessels, (cannon and bells,

* Pausanias, lib. x. cap. 5.

&c.) That this temple of brass was worked by Vulcan, that the walls were ornamented in gold by virgins who sang incantations like the Sirens of Homer, and that it was swallowed up and preserved by the earth, where it now remains entire, is the account handed down to us by the ancient writers.

SPINTHARUS.

B. C. 550.

WE only know that he was of Corinth, and re-erected the Temple of Apollo at Delphos, which had been destroyed by fire, and originally built by Trophonius and Agamedes.* The small cupola which was wanting, was afterwards added by Theodorus the Phocian. This temple, † the most famous of antiquity, was often exposed to accidents, and especially to plunder. Nero brought from thence five hundred bronze statues of gods and illustrious men. Among the most remarkable things in it ‡ were the proverbs of the seven sages, and of the Amphitryons, cut in the vestibule, to instruct men in their conduct in life. “ Know thyself,” and, “ Nothing immoderately,”—this is advised to all, though too often uselessly.

* Pausanias says, lib. x. cap. 5, that the fourth Temple of Apollo was built by Trophonius and Agamedes.

† Ibid. lib. x. cap. 7.

‡ Ibid. lib. x. cap. 24.

CTESIPHON* AND METAGENES.

CTESIPHON, † a native of Crete, rendered himself celebrated by the design which he made for the famous Temple of Diana at Ephesus, ‡ afterwards commenced by him: his son Metagenes finished it, gave all the details of its construction, and particularly of the machines invented by him to transport the enormous masses which were requisite for the work. The machine for moving the shafts of the columns from the quarries to the temple was extremely simple. Their weight being enormous, and the road very soft, to avoid the chance of the wheels sinking, they proceeded thus:—in the centre of each extremity of the shaft, they bedded in lead a pivot of iron; these pivots passed through holes in two large beams, 4 digits wide; at the ends were added two other beams of the same size, and as long as the shafts of the columns; at the angles were placed two cross pieces of holm oak to strengthen the frame; the pivots which passed through the holes of the beams, turned with so much ease, that as the oxen moved, the shaft continually revolved. To move the cornice they used wheels, in the middle of which it was incased and adjusted upright with pivots and rings, so that when the oxen drew the frame, the pivots went round in the rings to the motion of the wheels. These machines were simple and proper, as the quarry was only 8 miles distant from the temple, and between which, was a continued plane without hill or impediment.

* Chresophon, Chrysyphon, Chresipheon, Chtesiphron, Chersiphon: so it is variously written.

† Vitruvius, lib. x. cap. 6.

‡ Ibid. preface, lib. vii.

This temple was situated out of Ephesus,* in a marshy place, at the foot of a hill; such situations being considered by the ancients as least exposed to earthquakes. The expense of forming the drains must have been great, as the stone used for that purpose exhausted all the quarries in the country. These conduits and quarries are now taken for a labyrinth.† To remedy any inconvenience that might arise from damp, they very judiciously placed under the foundations strata of charcoal, and then strata of wool. Vitruvius‡ says, that its figure was octastyle, dipteral; that is, on all the four sides there was a double portico of columns, eight of which were seen only in front. All the designs which have been made of it by Menestrier, Perrault, Fischer, and Aulisio, are imperfect, and little conformable with the descriptions handed down to us. The ruins are still seen, but no idea of its original form can be obtained. The best description is that by the Marquess Poleni, which is to be found in an essay of the Academy at Cortona. The ascent to the portico was by ten steps. Vitruvius had not then given his rules why they should be unequal in number. The length of the portico was 398 feet, and its width, 193. The intercolumniations were two diameters and a quarter: the length of the cell was 245 feet, and its width 53.|| At one extremity was a niche, in which was a statue of the goddess. The

* Pliny, lib. xxxvi. cap. 14.

† Ibid.

‡ Vitruvius, lib. iii. cap. 1.

|| Pliny, lib. xxxvi. cap. 14. "The capitals, together with their architraves, friezes, &c., were raised by means of an inclined plane, formed of bags of sand, emptying those undermost when the mass was arrived, then letting them down gradually into their places."

These dimensions differ from Pliny; he says, 425 in length, 200 in breadth, and supported by 127 marble pillars 70 feet high, and that 27 were curiously carved.

temple was ornamented with 127 columns of fine Parian marble of the Ionic order, 60 feet high; 37 of which were the gift of as many kings, and were exquisitely worked.* Among these, one by the celebrated Scopas was the most admired. A small statue of ebony, representing Diana, which some impostor or fanatic had said had fallen from heaven, furnished the occasion for raising this temple, to the construction and embellishment of which all Asia Minor contributed with the most fervent zeal. This great work was in hand for 200 years, and was finished by Demetrius, a servant of Diana, and by Paonius of Ephesus; but it did not remain long, as Erostratus set fire to it to render his name immortal. From the same motive, a courtier of Charles V. threw his father and himself from the Church of St. Peter in the Vatican; to acquire fame, Democritus put out his eyes, if such a thing is possible, and laughed; Heraclitus cried for the same purpose, and Diogenes lived in a tub. If we were to take an account of all the follies committed by men, to render their names famous, that of Erostratus was not the most absurd. The Ephesians forbade his name ever to be pronounced: which surely was the very

* Pliny, lib. xvi. cap. 40, says, that the temple was 400 years in building. The timber used in constructing the roof was cedar.

Chandler, vol. i. p. 159. This temple was 420 feet long and 220 broad. The folding doors or gates had been constructed four years in glue, and were made of cypress wood, which had been treasured up for four generations, highly polished; these were found by Mucianus as fresh and as beautiful 400 years afterwards as when new: and the steps for ascending the roof, of a single stem of a vine, which witnessed the durable nature of that wood. The whole altar was in a manner full of the works of Praxiteles. The offerings were inestimable, and among them was a picture of Apelles, representing Alexander armed with thunder, for which he was paid 20 talents of gold. This structure was so wonderfully great in its composition, and so magnificently adorned, that it appeared the work of beings more than human.

way to immortalise him. It is said that Alexander the Great, who, by his false idea of glory, produced much evil, wished to rebuild the temple at his own expense, on condition that his name alone should form the inscription. The Ephesians rejected his offer with courtesy, replying, that it was not consistent for the god Alexander to erect a monument to a goddess. The expense of rebuilding the temple was afterwards defrayed out of the public money; and it was made much more magnificent than before, under the direction of the architect Cheiromocrates, or Dinocrates: and thus good was produced from the folly of Erostratus, who burnt it from the same feeling of vanity that induced the Ephesians to re-erect it: and he claims some thanks for not having destroyed the city entirely, the provinces, and kingdoms, as conquerors have done. But it is scarcely possible to imagine how a fire could consume an edifice of stone: it is possible that the roof, and some rooms within it, might be of timber; and these, together with the sacred utensils, would consequently be consumed. We may also admit that the burning timbers might have fallen on some of the capitals, and broken them, as well as discoloured the marble; but even this would not render the rebuilding requisite, or alter the plan: they therefore only cleaned the marbles, repaired the columns, and new-roofed it. It is thus we can explain how the people of Ephesus were capable of restoring that structure, to which so many cities and kings had contributed. This superb edifice was destroyed by the barbarians in the third and fourth century. Many of its finest ornaments now adorn the mosques at Constantinople.

GITIADAS

CONSTRUCTED* on a hill near Sparta, his native country, the brazen Temple to Minerva, Chalciæcus, † as has been mentioned before. In the interior were sculptured the labours of Hercules, of the Tyndaridæ, and other fabulous histories. This temple had corridors with two porticoes, which led to different altars, consecrated to the favourite deities of the Spartans: there was one to the Muses, the Lacedæmonians marching to battle, not to the sound of trumpets, but of flutes and lyres. Perhaps it was for this purpose that Gitiadas composed several songs, among which was one to Minerva, to a Doric air. In another temple to the Martial Venus, ‡ (a strange epithet for such a goddess,) was a Jupiter of bronze, not cast, but made of pieces riveted together by nails, and afterwards polished and rendered smooth. This statue is attributed to Dædalus.

CHRISOPHUS

WAS of Crete, || but it is not known when he lived: all that we have of his history is, that he built a number

* Pausanias, lib. iii. cap. 17.

† Ibid.

‡ Ibid. The statue was not in the Temple of Venus, but to the right of the Temple of Minerva, according to Pausanias.

There is a statue of St. Charles Borromeo, in the north of Italy, constructed in this manner.

|| Ibid. lib. viii. cap. 53.

of temples at Tegea, a city of Peloponnesus; dedicating one to Ceres and Proserpine, another to the Paphian Venus, and one to Apollo, in which was a statue to the honour of the architect.

ANDRONICUS.

It is also unknown at what period this architect lived: he was of Cerestus,* a country of Macedonia, and erected without the walls of Athens an octagonal tower of marble. On each of the eight fronts, was represented the emblem of the wind which blows against that side; it was crowned with a conical marble top, on which was placed a Triton in bronze, for a vane, which held in its right hand a wand so placed, that the wind moved it, and fixed it in such a situation, that the wand remained over the image of whatever wind was at that time blowing. But should a marine animal be so placed? These eight emblems of the winds were so sculptured, that each alluded to the particular effects it produced: thus Zephyrus was repre-

* Vitruvius, lib. i. cap. 6. Stuart and Revett's Antiquities of Athens, vol. i. The octagon tower of Andronicus Cyrrhestes is very accurately delineated from measurement, and described and restored in Stuart and Revett's Antiquities of Athens. The width of the outer face of each side of the octagon is 10 feet 9 inches 5-tenths, and of the inner 9 feet 4 inches; the walls are about 1 foot 7 inches thick; the whole height from the bottom step to the top of the cornice is 40 feet; the roof itself rises above the cornice about 5 feet 4 inches; the ground has accumulated around it to the height of 10 or 12 feet, and all the mouldings within reach are so defaced, that it is scarcely possible to determine their original form. The figures on the sides of the octagon are noble, bold pieces of sculpture, both for design and execution. In the interior of this building was a clepsydra or water-dial.

sented as a young man, with his body and legs bare, and flowers in his mantle; that wind blowing mildly at Athens, and being favourable to flowers: a bearded old man with sandals, and covered with a cloak, expressed the frigid Boreas. It is observable, moreover, that the roof of this tower was divided into twenty-four parts, by ribs of marble placed at equal distances, to indicate the other twenty-four winds distinct from the eight principal ones. No one of the dials was sufficient for the whole day, but, in succession, they shewed the hours as long as the sun was above the horizon. This building remains entire, among the celebrated ruins of Athens, and is called the Tower of the Winds: it is exceedingly curious for its antiquity, but not the most perfect in the details of its architecture: the exterior is of fine marble; the interior poor and dark; the outline and the sculpture mediocre.

METICUS AND EUPOLEMUS.

METICUS* formed a square at Athens, which bore his name, as did also an edifice built by him, in which the tribunal was held.

Eupolemus† of Argos erected a temple at Eubœa,

* Jul. Pollux, lib. viii. cap. 10.

† Pausanias, lib. ii. cap. 17. "On the right hand of Mycenæ, and at the distance of 15 stadia, there is a temple of Juno. The sculpture above the columns partly relates to the birth of Jupiter, partly to the battles of the gods and giants, and partly to the Trojan war and the destruction of Ilium. There are statues before the entrance of the temple, both of the women who have been priestesses of Juno, of heroes, and other persons; and, among these, of Orestes; for the statue which is inscribed with the name of Augustus, is said to be the statue of

dedicated to Juno. It was enriched with columns and sculpture, among which the statue of the goddess shone most conspicuous: it was of an extraordinary size, formed entirely of gold and ivory, and the work of Polycletus.* No deity of the heathens has received so much honour as Juno. This goddess was the queen of heaven, sister and wife of Jupiter, and presided over marriages, invented head-dresses, and every other fashion subject to female caprice: she had a temple in almost every part of Greece and Italy: that called Juno Lacinia, † six miles from Crotona, was one of the most famous. The accounts of its origin and foundation are fabulous; but it is agreed on by all, that it surpassed in extent the largest temple at Rome. It was covered with tiles of marble, some of which were conveyed to Rome ‡ in the year of its foundation 579, by Q. Fl. Flaccus, to cover the Temple of (Fortuna Equestris,)—Equestrian Fortune, which he was then building. But this censor destroying himself, the senate had the tiles conveyed back from whence they had been taken. ||—Annibal did not execute his design of removing a golden pillar from this temple: Strabo, Pliny, and Titus Livius, refer us to many miracles performed in this place; but the latter adds, “miracles are frequently attributed to these sort of places, particularly when distinguished by their riches and fame.”

Orestes. In the vestibule of the temple you will perceive on the left hand ancient statues of the Graces, and on the right hand the bed of Juno. In the vestibule, too, that shield is dedicated, which Menelaus took from Euphorbus, in the Trojan war.”

* This statue, according to Pausanias, had a crown on her head, in which the Graces and Hours were represented, and in one hand she held a pomegranate, and in the other a sceptre.

† Livy, lib. xxiv. cap. 3.

‡ Ibid. lib. xlii. cap. 3.

|| Ibid. lib. xlii. cap. 28.

CALLIMACHUS

(B. C. 550)

WAS of Corinth, and an excellent sculptor: he was called by the Athenians *Catatechnos*,* the first of artists. Some authors say he was a painter: he is here ranked among architects, not from knowing him actually to have been such, but on account of his invention of the Corinthian capital.—There died at Corinth a virgin who was marriageable; her nurse, according to the custom of the times, placed on her tomb a basket containing those viands most agreeable to her when alive, and in order to preserve them better, covered it with a tile. This basket was by chance placed over the root of an acanthus, now called *branca ursina*; the plant being pressed by the weight at the time of its putting forth its spring leaves and stems, as they grew up they covered it in so elegant a manner, as to attract the notice of Callimachus as he passed, who was so pleased with the idea and novelty of the figure, that he modelled from it the Corinthian capital; and left to posterity a proof that art may be benefited by imitating the chance productions of nature. He established besides the proportions, and determined the true admeasurements of the Corinthian order. Callimachus† made for the Temple of Minerva at Athens a lamp of gold, the wick of which was composed of the asbestos: it burned day and night for a year, without being replenished with oil. These economical inventions should never have been forgotten:—but they are renewed at various times by the cunning, to impose

* Vitruvius, lib. iv. cap. 1.

† Pausanias, lib. i. cap. 26.

upon the credulous. Impostors disseminate them among the vulgar, who are ever ready to believe the marvellous. The asbestos* may burn without destroying its substance, but not without the sustenance of oil; and oil, in burning, must be consumed. But what are the perpetual lamps so much celebrated among the learned, and found burning after many centuries in the tombs, but fables? The most trifling knowledge of chemistry is sufficient to prove that they are so. Those who have excavated or opened any sepulchres, have observed a smoke or light, which has soon been extinguished, and this has given rise to the idea of the perpetual sepulchral lamps. These phenomena are observed where there is neither light nor sepulchre; as it is well known that dense and confined air exposed to the atmosphere and dissipated ignites. Callimachus† was not of the first class of sculptors, but he excelled in certain points, and was the first who discovered the method of drilling marble. Such was the fastidiousness of his taste with regard to his own works, that he was generally designated the “sworn enemy of the arts.”

TARCHESIUS AND ARGELIUS.

THESE two architects wrote treatises on architecture, and gave the symmetry of the Corinthian order. The former‡ did not approve of the use of the Doric in

* Pausanias says, that it is owing to the wick of the lamp being made of Carpasian flax, which alone, of all other things, is inconsumable by fire.

† Ibid. lib. i. cap. 26.

‡ Vitruvius, lib. iv. cap. 3.

temples, advising the Corinthian or Ionic as more appropriate. Argelius,* in his book, gives, moreover, a description of an Ionic temple of Esculapius, which is believed to have been built by him at Tralles, in Asia Minor.

ANTISTATES, ANTIMACHIDES, CALLESCHROS,
AND PORINUS.

B.C. 555.

ABOUT the time of Deucalion† a temple to Jupiter was erected in Athens, which after a thousand years fell to ruin. Pisistratus‡ undertook to have another erected, under the title of Jupiter Olympius, and employed these four architects, who proceeded so far with it that Pisistratus was enabled to dedicate it; but at the death of that monarch a variety of changes took place. This building, so magnificent and grand in its design, impressing every one with awe and astonishment, was suspended, and became the work of subsequent ages; many sovereigns attached to the arts took pleasure in embellishing and finishing it. Perseus, king of Macedonia, and Antiochus Epiphanes, nearly four hundred years after|| Pisistratus, finished the cell, or grand nave, and placed the columns of the portico; Cossutius, a Roman, being the architect. It became, and with reason, one of the four celebrated marble temples of Greece; the other three were of Diana at Ephesus, Apollo at Miletus, and Ceres at Eleusis§. The Corinthian order prevailed; the

* Vitruvius, preface to lib. vii.

† Pausanias, lib. i. cap. 10.

‡ Vitruvius, preface to lib. vii.

|| Strabo, lib. ix. says Pisistratus left it half finished.

§ Vitruvius, preface to lib. vii.

portico,* octastyle, dipteral, that is with double wings all round, eight columns in front, and ornamented with statues of the Athenian colonies. The interior was surrounded with two orders of columns over each other, and detached from the wall, thus forming interior porticoes, or small naves; the middle was uncovered, according to the custom of the ancients. In the siege that Sylla laid to Athens, this temple was greatly injured, but the allied kings afterwards restored it, at their common expense, with the intention of dedicating it to the genius of Augustus. Titus Livius says, that, among so many temples, this was the only one worthy of a god. The emperor Adrian† enclosed it with a wall, as was usual with the Grecian temples, of half a mile in circumference, ornamented with statues, which the cities of Greece erected to that emperor. The Athenians distinguished themselves by the elevation of a colossal one behind the temple. This enclosure was, besides, decorated by a peristyle 100 poles long, supported by superb marble Corinthian columns, and to this façade were three grand vestibules, which led to the temple. Adrian dedicated it a second time. In it was placed the celebrated statue of Jupiter Olympius, of gold and ivory, peculiar for the exactness of its proportions. The courtiers likewise added four statues

* Vitruvius, lib. iii. cap. 1. Newton, in a note to his translation of this passage in Vitruvius, clearly proves that this temple is described by the author as *decastyle*; and Stuart, in his account, observes, that Vitruvius's own words refute the opinions of most of his commentators, for he describes the temple as a *dipteros*, and as having ten columns in front; and further states, that it had a range of columns round the interior of the cell, and was *hypæthros*. Now, if it had been octastyle, the uncovered part would scarcely have been wider than one intercolumniation of the external portico: whereas the hypæthral aperture was generally equal to three intercolumniations, and two diameters of the columns.

† Pausanias, lib. i. cap. 18.

of the emperor. This grand temple,* the expense of which is calculated at five millions of scudi, now serves as a market for the Turks, who, to shelter themselves from the sun, have planted arbours among the ruins.†

AGAPTOS

WAS the inventor of the porticoes round the square attached to the Greek stadii:‡ for this invention he acquired so much honour, that in every stadium they were afterwards called the porticoes of Agaptos. They served for the horses and chariots that were entered for the course, whence they are improperly called by some the *carceri*, which term belonged to the Roman amphitheatres where the wild beasts were confined.

* These magnificent ruins at present consist of sixteen Corinthian columns, 6 feet 4, and some 6 feet 6 inches in diameter; the length of the temple, as measured by Stuart, upon the upper step, was 354 feet, its breadth 171; and the length of the walls of the peribolus, from out to out, is 688 feet, and the width 463.

† Milizia evidently supposes the building Stuart calls the Poikile Stoa, was the Temple of Jupiter Olympius; for that is planted, while the latter is without inhabitants.

‡ Pausanias, lib. v. cap. 15.

CLEOETAS,

AN architect and sculptor, who invented the barrier which was erected in the famous grove of Altis,* near Olympia in Elis. Above that part of the stadium where the judges of the games sit was a plain for horse races. It had before it a space called the bar, where all the horses and chariots that were entered on the lists assembled. Where the bar united with the portico of Agaptos, it widened on each side. The figure of these barriers resembled that of a ship's beak, or prow, and was externally decorated with columns and festoons, with a bronze dolphin at top. Each side of the barrier was 400 feet in length, and contained small porticoes for the running horses; from thence they entered by two highly decorated side doors. The chariots and horses were confined by a rope extended across from one end to the other, which kept them within the barrier. In the middle of this inclosure was an altar of rough bricks, which was whitened every olympiad. On it was a bronze eagle, having the wings spread; by means of a spring this was raised so as to be seen by all the spectators; at the same time the dolphin on the beak fell towards the earth, which was the signal for the rope to be removed, when all the competitors in the chariots and on horseback pressed towards the beak, and at one moment entered the lists; the dexterity of the drivers or the swiftness of the horses decided the victory.

Cleoetas became so celebrated for this barrier, that an inscription was placed at the foot of his statue at Athens to this effect:—"Cleoetas, son of Aristocles, who invented the bar at Olympia." Pausanias does not tell us if Cleoetas

* Pausanias, lib. vi. cap. 20.

was, as is probable, the architect of the Stadium. One side was occupied by seats, opposite to which was a round altar, consecrated to a genius who frightened horses, and therefore called *Taraxippos*. Many fables were invented concerning the origin and the effects of this strange demon. The other side was on the declivity of a hill. A more full account of this Stadium, and the beak, is given in the Pausanias of Gedoyn, which the Chevalier Tolard has illustrated by a beautiful design. Pausanias* does not describe very fully the Stadium at Athens; he merely observes that it was in the form of a half-moon, of white marble, and constructed by Herodes Atticus, who exhausted a quarry in Mount Pentelicus for the purpose. It is related, that his father, Atticus, having discovered a treasure, demanded of the emperor Nerva what he was to do with it. "What you please," was the first answer.† But Atticus representing that it was too great for a private man, the emperor replied, "Abuse thy unexpected gain." Herodes, the son of this fortunate Atticus, employed the treasure in decorating Athens with superb buildings. He was a polite and literary character, the author of many works now lost, and master of Marcus Aurelius and Lucius Verus.

MANDROCLES

(B.C. 500)

ACQUIRED a great name from the bridge he constructed across the Thracian Bosphorus, or Straits of Constan-

* Pausanias, lib. i. cap. 19.

† Gibbon's Decline and Fall of the Roman Empire, vol. i. p. 72.

tinople, by order of Darius, king of Persia. This bridge was formed of boats so ingeniously and firmly united that the innumerable armies of Persia passed over it from Asia to Europe. To preserve the memory of so singular a work, Mandrocles represented in a picture, the Bosphorus, the bridge, the king of Persia seated on a throne, and the army that passed over it. This picture was preserved in the Temple of Juno at Samos, where Herodotus* saw it, with this inscription,—“Mandrocles, after having constructed a bridge of boats over the Bosphorus, by order of the king Darius, of Persia, dedicated this monument to Juno, which does honour to Samos, his country, and confers glory on the artificer.”

PHEAX, OR PHEACES,

(B. C. 500,)

CONSTRUCTED a number of edifices in Sicily,† and particularly at Agrigentum, where he employed the Carthaginians, taken prisoners by Gelon, in the signal victory he obtained over them. He embellished the city, and made the subterraneous conduits, which were called after his name Pheaces. It is probable, that he erected the famous Temple of Jupiter referred to by Diodorus Siculus,‡ who describes it to have been 340 feet long, 60 feet wide, 120 feet high, and of an admirable construction, with circular pillars without and square within, so large that their circumference was not less than

* Herodotus, lib. iv. cap. 88. † Diodorus Sic. lib. xi. cap. 2.

‡ Ibid. lib. xiii. cap. 12.

32 feet, and the flutings sufficiently deep to admit of a man standing within them. The remains of these columns are still seen near Agrigentum.

LIBON OF MESSENA

(B. C. 450)

ERECTED the famous Temple of Jupiter, near Pisa, or Olympia in Peloponessus, where the Olympic games were celebrated every fourth year. This temple* was of the Doric order, 230 feet long, 95 feet wide, and 68 feet high, surrounded by a number of columns, and covered with marble cut in the form of tiles, the use of which was invented by the sculptor Byzas of Naxos, almost two hundred years before. Within the temple was the statue of Jupiter, wrought by the renowned Phidias in gold and ivory; it was 60 feet high, and, though in a sitting posture, almost touched the ceiling—so that had the statue wished to rise, he must have carried the roof away with him. The pediment in front, as well as that at the back of the temple, was ornamented with sculpture; the interior was of two orders of columns supporting lofty galleries; through these was a passage to the throne of Jove, glittering with gold and gems, surrounded by an inclosure, on which were painted historical subjects. On the most elevated part of the throne, above the head of the statue, Phidias represented the Graces on one side, and the Hours on the other. The latter were the three daughters of Jupiter, and, according to Homer, guardians

* Pausanias, lib. v. cap. 10.

of heaven. The pedestal of the statue was of gold, ornamented with a number of deities in basso-relievo. Jupiter was crowned with olive: his right hand held a victory of gold and ivory, adorned with a fillet or crown; in his left was a golden sceptre, of exquisite workmanship, on the top of which was an eagle: the sandals and mantle of the god were also of the same metal, the latter sculptured with every kind of animal and flower: among these, the most predominant was the lily. It was enriched further by a collection of paintings, metals of every kind, gems, ivory, ebony, and productions from the animal and vegetable world.

“ Phidias, the son of Charmidas, an Athenian, made me,” was the inscription at the foot of Jupiter. Pausanias * observes, that the sculptor having prayed the god to give him some proof of his approbation, a thunderbolt fell in the temple, which was considered by the ancients a fortunate omen.

The situation of the temple being marshy, the ivory was preserved from damp by oil frequently poured upon it, from a fountain placed on the pavement contiguous to the statue. A different practice was adopted in the citadel of Athens, which was a dry situation; water was there used to preserve the statue of the Virgin, or Minerva, from becoming too dry. In Epidaurus, to preserve the statue of Esculapius, without the continual trouble of obtaining oil or water, the throne was placed over a well. Besides the Temple of Jupiter Olympius, † there was that of Juno, likewise of the Doric order, 63 feet long, surrounded with columns, one of which, situated at the back part of the temple, was of oak. The architect Libon, if he built this temple, had no doubt some motive for placing this oak column amidst those of marble. Sixteen matrons were constantly employed in

* Pausanias, lib. v. cap. 11.

† Ibid. lib. v. cap. 16.

embroidering a veil, which was dedicated to the goddess every fifth year, when games were celebrated in which none but virgins were permitted to run; they were divided into three classes, the first consisting of children, the second of girls, the third of young women. They were clothed in vests, which came to the knees, and were open at the breast; their hair was flowing. The matrons, with other associates, presided. The conquerors were crowned with olive, and had a portion of the calf sacrificed to Juno, and their picture hung up in the temple to perpetuate the memory of their glory. In front of the temple was a wood of olives, within which was the stadium, or place for the athletic exercises. It is well known that the Greeks and Romans made these places of great importance.

CHAPTER II.

FROM THE TIME OF PERICLES TO THAT
OF ALEXANDER.

450 TO 300 B.C.

IT was under Pericles* that the Athenians became as celebrated for the magnificence of their edifices,† and for excellence in the other arts, as they had formerly been for their warlike exploits. Athens was the depository of those public treasures, contributed by all the cities of Greece, for the maintenance of the armies and fleet employed against the common enemy, the Persians. Pericles, by his eloquence and rare talents, acquired almost regal authority in the republic; and, after providing for the security of Greece, instead of engaging in destructive and expensive wars, employed the remainder in embellishing his native country. He inspired the Athenians with a taste for the fine arts; and excited so much emulation among eminent artists of all kinds, that each, intent on

* Plutarch, Life of Pericles.

† Most of the mighty structures of the ancients, which have excited our astonishment, and now serve us for models in the practice of our art, were erected in the space of about three centuries, commencing with the year 600 B. C., when the Temples of Jupiter at Olympia and in the Capitol at Rome, those at Samos, Priene, Ephesus, and Magnesia, were begun, to the time when, under Pericles, the ornamental style of Grecian architecture attained its perfection in the Temple of Minerva in the Acropolis, built after the model of that of Jupiter in Olympia; and, finally, the Temple of Diana at Ephesus, in the time of Alexander, completed this first period. — See Ionian Antiquities.

immortalising his name, was emulous to excel by greatness of design and by excellence in execution.

Phidias was selected as superintendent of these edifices, although Athens then possessed a multitude of architects; he established a grand and sublime style in sculpture, which extended to painting. Apelles added the graces; the style which afterwards succeeded, gradually declined till the time of Justinian. The same may be said of architecture. It is remarkable that, notwithstanding the precipitation with which the buildings were constructed, their solidity was so great, that more than six centuries after they possessed a grace and freshness which time had not been able to efface. Many extraordinary remains still exist. One of the greatest works of Pericles was the Pireus, the port of Athens, about six miles distance from the city. Themistocles, to save the Athenians from the fury of the Persians, formed this port, and equipped a fleet, with which he performed those wonders Greece has so much exaggerated in history. Pericles enlarged this port, which was at a sufficient distance to preserve the city from being annoyed by the lower order of mariners; surrounded it with edifices, and embellished it in such a manner, that it almost formed another city, and was united to Athens by its buildings and the great wall, which served as a defence.

We have hitherto considered Pericles only as the promoter of great works in architecture — we may now speak of him as an architect. By continually observing the erection of so many works, by conversing with the most able architects, and from the instructions of his great friend Anaxagoras, a philosopher of the first rank, and president of architecture, he acquired that science. The design of the Odeum is attributed to him. This building, where the musicians assembled to rival each other, was called Odeum, because principally destined to give delight to the ear. It was near the theatre. Its figure was

elliptical; a part was constructed on the rock, and part with large stones, cut to the form of a diamond. It was surrounded by a colonnade, except to the south, where it was inclosed to shelter the audience from the sun. Within were seats of marble; but it differed from the theatres in this respect, being covered with a roof formed of the masts and sails of the vessels taken from the Persians, and terminating in a point, in imitation of the tent of Xerxes. It was injured in the siege that Sylla laid to Athens; but Ariobarzanes Philopater, king of Cappadocia, about 700 years after the foundation of Rome, repaired it, and employed three architects, Caius Mutius and Marcus Stallio, Romans, and Menalippus, who was supposed to be a Greek.

HIPPODAMUS OF MILETUS,

DURING the Peloponesian war, built the port of Athens; but the great work of this famous architect was the city of Rhodes,* one of the most conspicuous of antiquity. It was disposed in the form of an amphitheatre, ornamented with magnificent buildings, ample streets, squares, walks, and groves. There were temples for all the gods of paganism: † among the number, that of the Sun, called Haleium, was considered the finest. That of Bacchus was enriched with a prodigious number of pictures of the school of the celebrated Protogenes. Those of Isis of Ocridione and of Diana ‡ were masterpieces of architecture. Pliny || says, that in his time Rhodes possessed more than three thousand statues, the greater part finely

* Strabo, lib. xiv.

† Dio Chrysostomus in Rhodiac.

‡ Suetonius.

|| Pliny, lib. xxxiv. cap. 7.

executed, with other works of art, of more value than all those contained in the cities of Greece. Here was the wonderful Colossus made in three years by Chares of Lindus, a disciple of Lysippus.

ICTINUS AND CALLICRATES

WERE employed by Pericles* to erect a temple to Minerva, called Parthenon,† or Virgin, within the citadel, in the most elevated part of Athens. The two artists ‡ exerted all their power to make this temple worthy of the goddess who presided over the arts. The plan was a rectangle, like most of the Grecian and Roman: its length from east to west was 227 feet 7 inches, and its width 101 feet 2 inches, as measured on the top step. It was peripteral, octastyle, that is, surrounded by a portico of columns, with eight to each façade. || The ascent to this portico was by three steps, each 2 feet 3 inches and a half wide, and 1 foot 8 inches and a quarter high. It appears that the Greeks proportioned the height of their steps to the size of their temples. That of Theseus, which was half the size of the above, had the steps also half their height. On these were isolated columns of the Doric order, without any base, forming the portico, the Greeks never giving one to this order. It appears that the steps were intended

* Plutarch, Life of Pericles.

† This temple was very accurately measured by Stuart and Revett, and is given in the Antiquities of Athens.

‡ Vitruvius, pref. lib. vii.

|| It had seventeen columns on each flank, including those at the angles, so that it agreed with Vitruvius's precept in having one more column in flank than double those of the front.

for that purpose. The height of the columns* was 34 feet 2 inches 8-tenths, and their greatest diameter 6 feet 1 inch 8-tenths, or from axis to axis 6 feet 2·72 inches, so that their height was equal (nearly) to six diameters. This is the second state of the Doric proportion with the Greeks; and it thus continued till the time the Romans conquered the country, as we shall see hereafter. Within the outer porticoes, of which we have made mention, was a second, also formed by isolated columns, † but elevated two steps higher than the first; from thence the cell was entered, which was dark, as was customary among the Greeks, not receiving any other light than from the doors. It was surrounded within by two orders of columns, ‡ isolated

* Each column was composed of twelve courses or blocks of marble; and the bed of each has two circles described upon it: the outer one 9 inches from the edge; the inner circle is about 20 inches diameter. Between these two circles the marble is not polished, is left rough from the chisel, and a little sunk to hold the mortar. In the centre is a hole 5 inches and a half square, sunk three inches. In these were inserted pieces of wood, 6 inches long, for the purpose of keeping the blocks in their places. The whole column diminishes about 1 foot 4 inches, and has 20 flutes. The entasis is very observable.

† These columns are only 5 feet 6 inches 5-tenths diameter, and 30 feet 8 inches 8-tenths high. They are placed before, and not between the antæ, and are what Vitruvius calls (lib. iv. cap. 7) being placed on the shoulders of the pronaos.

‡ The transverse walls terminating the pronaos and posticus receded 12 feet behind the columns of the interior range, and doors were left in them to approach the cell. Between the posticus and the cell, the *opisthodomus* was situated, 62 feet 6 inches wide, and 42 feet 10 inches deep. A wall, 6 feet 10 inches thick, separated this from the cell, equal in width, and 98 feet 7 inches in length. The latter, according to Stuart, had two interior ranges of columns, dividing it into three aisles. The pavement, 15 feet 2 inches from the walls all round, is a little more than an inch above that of the middle; and on the edge of this little step are still to be seen distinctly traced circles, 2 feet 1 inch in diameter, and 8 feet 4 inches from centre to centre; but as these occur occasionally over the joints of the pavement, they cannot be the original situations of

and over each other. Here was the famous statue of Minerva, executed by Phidias,* of gold and ivory, in a standing position, attired in long vestments, with a spear in her hand, on her helmet a sphinx, supported by two griffins; on her breast the head of Medusa, of ivory; at her feet the ægis: the pedestal was ornamented with a basso-relievo representing Pandora, and at the side a statue of Victory, 4 cubits high. The whole of the temple was of white marble, and could be seen from an immense distance. On a nearer approach, it was admirable for the elegance of its proportions, and the beauty of the basso-relievos with which its exterior was decorated. The capitals of the columns consisted but of few members, and without an astragal; the ovolo had so little projection that it did not conceal any part of the capital: the abacus was without a cyma, which would have seemed trifling in so majestic an order. After this style are the capitals of the columns at St. Peter's in Vincoli at Rome, and some in the Villa Adriana at Tivoli. The entablatures† were a third of the height of the columns. The

the column, but probably those mentioned by Wheeler as supporting galleries. There are other indications of circles 3 feet 4 inches diameter; one of which, at the north-east angle of the sunk pavement, is very evident, and in the middle of the stone. The raised pavement may have been a covered aisle, and the sunk part probably open to the air, thus constituting an hypæthral temple.

In the *opisthodomus* there are four stones, 5 feet 8 inches by 5 feet 10 inches, in the pavement 14 inches thick, which have circles 4 feet diameter indicated upon them. Over these were placed the columns that supported the roof. The clear width between these stones, from north to south, is 17 feet, and from east to west 10 feet. In the other part of the pavement the stones are much smaller, and only 9 inches thick.

* Pliny, lib. xxxvi. cap. 5, says the statue was 26 cubits high.

† The whole entablature is 12 feet 2 inches high. In the architrave triangular holes have been sunk under each metope, probably to attach shields, as Pausanias, lib. v. cap. 10, describes at the Temple of

frieze was ornamented in the metopes with basso-relievos, representing the combats of the Athenians against the Centaurs, but well relieved, as they were calculated to be seen from some distance. It is observable that the metopes were made higher than wide, that they might appear square when viewed from below. Surely this is a proof that the ancients understood optics and perspective. Whilst Æschylus, the reformer of the theatre, represented at Athens the tragedies composed by him, Agatharcos, who painted the scenes, wrote a treatise on perspective. Democritus and Anaxagoras afterwards illustrated the subject by various writings. It is remarkable, that in this temple, as in all others of the Doric, the Greeks placed triglyphs at the angles, and not the half of a metope, as was the practice of the Romans. It is more consistent that the triglyph, which represents the cross beams, should be so placed: but by this arrangement the intercolumniation* at the angles became smaller.

The pediment was low, † as usual among the Greeks; it

Jupiter at Olympia. The architrave extends from column to column, and is composed of three thicknesses of marble, shewing two joints in the soffite. The frieze is admirably contrived to save both materials and labour. The triglyphs are each out of a single block, being 3 feet wide and only 2 feet three inches, or thereabouts, in thickness. At each end, in front, a groove is formed, about an inch and a half deep, into which the sculptured metopes are slipt; these in front measure between the triglyphs 4 feet 3·15 inches, (excepting the one nearest the angle, which is 4 feet 0·15 inches,) and at the back only 2 feet 10 inches; so that there is a hollow space from 8 to 14 inches at the back and sides of the metopes and triglyphs. A metal cramp, 2 feet long, in form of an H, holds the metope to the back of the frieze, and they are attached to the triglyphs by another, 1 foot 5 inches long on each side. The cornice is of one thickness; the angular block covers two mutules; each of the other, one space and a mutule.

* The first intercolumniation is 5 feet 8 inches 8-tenths, and all the others 7 feet 11 inches 5-tenths.

† Acroteria were placed at the angles of the pediments, on which were placed, probably, bronze ornaments. Pausanias, lib. xi. cap. 3, says, at the Temple of Jupiter in Olympia they had vases of gilt metal.

had no mutules under the soffite of the level cornice; at each angle were the heads of lions, to carry off the water.

In the tympanum of the pediment were groups of figures wholly detached, the subject of which was the birth of Minerva; to these were afterwards added those of Adrian and the empress Sabina. In that of the posticus was the combat of Minerva and Neptune. These pediments are called eagles by Pausanias,* perhaps from their resemblance to the wings of that bird in the act of taking flight. On the polished walls of the cell was externally a sculptured frieze,† significant of the sacrifices and processions

* Lib. i. cap. 24.

† This frieze was 3 feet 4 inches high, and continued round the walls of the cell a length of 520 feet. The subject represented was the Panathenian festival, and consisted of figures of both sexes, and of every age, priests, charioteers, horsemen, cattle, victors, youths, maidens, gods, heroes, &c. Guttæ were introduced on the architrave under this frieze, although the triglyphs were omitted. The walk round the temple, between the columns and the walls of the cell, was covered by marble lacunaria, but these were disposed at equal distances, and without reference to the situations of the columns, the beams not resting always over them. The pavement of this peristyle was formed of slabs of marble the whole width, and about 4 feet 10 inches wide.

The courses that form the walls of the cell are laid without cement, and are fastened together by cramps of metal run with lead. Each bond stone has four of these cramps, about 10 inches long, and in form of an H, the two ends being 4 inches wide; these are sunk into the marble about 3 inches. There are also upright plates of metal 6 inches high, 4 inches wide, and a quarter of an inch thick, that serve to confine the bond stones.

Every part of the masonry is constructed with the greatest care and attention; the beds and ends of the marble are highly polished, and frequently the joints are so close that they are scarcely visible. The marble generally appears to be of one quality, and, where recently fractured, has the appearance of the finest lump sugar. The lowest course consists of two stretchers, 8 feet long and 3 feet 9½ inches high, with a space of from 2 to 5 inches between them. The next is a course of bond stones, running through the whole wall, 3 feet 10 inches and 3-tenths thick, and is, as well as the courses above, 1 foot 4½ inches high, and 4 feet long.

Some of the members of the cornice were gilt; a fret, with a honey-

of the ancient Athenians. Ictinus, and Carpion, who was also most probably one of the architects of this temple, gave a description of it, according to the custom of the Greek architects. This renowned edifice was preserved entire till 1677, when, in the siege laid to Athens by Morosini, a bomb fell, which set fire to some powder placed there by the Turks, and exploding in a great measure destroyed it. The Venetians took down the sculptures of the pediment,* but in displacing them they unfortunately fell to the ground, and were entirely broken. The ruins of the temple still remain, and in the centre the Turks have erected a mosque, covered with a low cupola.

Ictinus was also the architect of the famous Doric Temple of Ceres† and Proserpine in Eleusis; but he only built the cell, which was without exterior columns, and of an immense size, capable of containing thirty thousand persons, since as many were present in the noisy Eleusinian ceremonies. St. Peter's can only contain half the number.

Plutarch‡ says, that the first architect was Correbus, to whom succeeded Metagenes, who erected the second order; Zenocles then raised the cupola which covered the sanctuary.

Ictinus erected temples in many other places; among which the most remarkable was that of Apollo, called *the*

suckle under, is still to be seen, painted on the west front. This mode of decoration is not unusual in Grecian buildings; the marble was frequently painted or gilt, which must have destroyed that simplicity of style we so much admire.

* A great portion of this sculpture was rescued from the ruins by the Earl of Elgin, and sent to this country; it is now, by the liberality of our government, preserved in the British Museum.

† There are scarcely any vestiges of this temple. See *Ionian Antiquities*.

‡ Life of Pericles.

Helper,* near Mount Cotyion in Arcadia, in the Peloponnesus. It passed for one of the finest of antiquity, and was vaulted with stone. The ancients sometimes used bricks; not from a scarcity of marble, or from parsimony, but for the purpose of giving a greater firmness to their buildings: these were encrusted with marble, to appear more beautiful.

MENISICLES, OR MNESICLES,

DESIGNED, by order of Pericles,† the famous *Propylea*, or that magnificent portico which served as an entrance and façade to the citadel of Athens. The whole was of white marble, with columns of the Doric order.‡ It

* Pausanias, lib. viii. cap. 41. "Ictinus, the architect of the temple at Phigalia, was cotemporary with Pericles, and built the Parthenon for the Athenians." The ruins of this temple still remain, on a lofty hill, in a beautiful situation, and commanding two sea views. Most of the columns of the peristyle, with the architrave above, are standing, and form a picturesque ruin.

† Plutarch, *Life of Pericles*.

‡ The *Propylea* was commenced about 437 years before Christ, and cost nearly half a million sterling. Each front had a Doric hexastyle portico, raised upon three steps: the columns were nearly 5 feet diameter, and 29 feet high, including the capital. From the west front you entered a vestibule 59 feet 2 inches wide, which was divided into three aisles by six Ionic columns, three on each side; these supported a marble ceiling (see Pausanias, lib. i. cap. 22) divided into lacunaria; these lacunaria are formed of blocks 22 feet long, and extended from the walls to the columns; some of them remain. The wall at the end of the vestibule had five openings, in which were hung the gates of the Acropolis; the central one is much the widest. The eastern portico, to which there was an ascent by five steps, was entered through these gates: from hence there was a descent of three steps to the level

had five gates, that in the centre being the largest, with an interior vestibule ornamented with Ionic columns; from what remains, it may be inferred they were placed on a stylobate. The façade was ornamented with equestrian statues on isolated pedestals.

Among the various artificers who worked at this edifice was a slave named Splanchnoptes,* a favourite of Pericles, who fell from the building; Pericles cured his wounds and contusions with the herb *parietaria*, the properties of which were not then known to the Athenians. The crafty Pericles pretended that the goddess Minerva had revealed to him the efficacy of this herb. In gratitude for this benefit, the Athenians employed Phidias to make a statue of gold and ivory, which they dedicated to Minerva Medica; and also another statue in bronze to Splanchnoptes, as being the occasion of so useful a discovery.

At this time Greece abounded with treatises on architecture. The architects, as has been observed, were accustomed to give descriptions of the edifices on which they had been employed. Silenus gave the proportions of the Doric; Pythius wrote on the Temple of Minerva, erected by him, of the Ionic order, at Priene, now Palazzo, in Ionia; Nymphodorus and Daphilus, (so dilatory in his work that it became a proverb, "more tardy than Daphilus,") Charidas, Phyrus, Agasistrates, Mexaris, Teocides, Demophilus, Poelis, Leonides, Silanion, Melampus, Sarnacus Euphranor,† were all architects, and wrote on that science; but their works, as well as those of many others, are unfortunately lost. Printing may preserve ours from this misfortune.

of the ground before the interior front. Among the ruins may be observed some of the members of the cornice, which were gilt, and other parts painted with a reddish ochre.

* Pliny, lib. xxii. cap. 17.

† Vitruvius, lib. i. cap. 1; lib. vii. preface; lib. x. cap. 19.

POLYCLETES, OR POLYCLETUS,

B. C. 420,

A sculptor and architect of Argos. He built a rotunda of white marble at Epidaurus, which, says Pausanias,* merits attention; also the theatre, which, according to the same author, “is of singular beauty. The theatres of Rome surpass all others in magnificence and ornament, as well as in size, without excepting that of Megalopolis, near Arcadia; but for elegance and symmetry, that of Polycletes may dispute the palm.” It is to be regretted that Pausanias did not leave a more full account of these magnificent works, instead of being so diffuse on the genealogy of Theseus, Hercules, and other heroes.

DEMETRIUS, PEONIUS, DAPHNIS.

ABOUT the same time the Temple of Diana † at Ephesus was completed by Peonius, and Demetrius, a priest of Diana, Peonius of Ephesus, and Daphnis a Milesian, built in the city of Miletus ‡ another temple consecrated to Apollo, || entirely of marble, and of the Ionic order,

* Lib. ii. cap. 27. † Vitruvius, pref. lib. vii. ‡ Strabo.

|| The Temple of Apollo Didymæus, 22½ miles from Miletus. With what magnificence and prodigious spirit this new edifice was designed, may in some measure be collected from the present remains. Strabo has termed it “the greatest of all temples;” adding, “it continued without

the grandest and most magnificent work of which the cities of Greece can boast. It is to be observed, that the Greeks did not use any plinth under the base of the Ionic or Corinthian column, nor any base under the Doric. The Romans made this addition, and afterwards introduced them in Greece, under the emperors.

PYRHUS, LACRATES, AND HERMON.

PYRHUS, or Pyrrus, with his two sons, constructed in Olympia,* for the Epidamnians, an edifice called the

a roof, on account of its bigness." Pausanias mentions it as unfinished, but as one of the wonders peculiar to Ionia; and Vitruvius numbers it among the four temples which had raised their architects to the summit of renown. The plan of this temple was a parallelogram, 303 feet 6 inches in length, by 164 feet 5 inches in width, measured upon the upper step. The cella is surrounded by a double row of columns, the outer peristyle having 21 in the sides, and 10 in each front. The walls within the cella are divided into compartments, by pilasters placed at equal distances all round, excepting at the entrances, where there are two semi-columns of the Corinthian order. There was only one entrance through the pronaos at the east end, which was of considerable depth. The wall of the cella in the back front is 8 feet 10 inches in thickness. The columns of the inner peristyle have 24 flutes the whole length of their shafts, but those of the external range only to a distance of 2 feet below their capitals, the rest of their shafts being left rough. The height of the three steps is 5 feet; the height of the column, including capital and base, is 63 feet 1 inch 6-tenths: their lower diameter 6 feet 3 inches 2-tenths, and upper ditto 5 feet 5 inches 8-tenths; the architrave is 3 feet 5 inches 2-tenths high: no part of the cornice can be now discovered. The columns are more than nine and a half diameters high, and the architrave not deep enough; great defects not to be reconciled to the exquisite finish of all the parts.—*Ionian Antiquities*.

* Pausanias, lib. vi. cap. 19.

treasury, where Theocles raised two statues of cedar, one representing Hercules approaching the garden of the Hesperides, and the other, Atlas supporting the heavens.

POTHOEUS, ANTIPHILUS, AND MEGACLES,

ERECTED in the same city of Olympia,* for the Carthaginians, another treasury, where was an altar and a beautiful statue of Jove, and some spoils acquired by the Carthaginians from the Syracusans. It is probable that these treasuries were small votive temples, erected in Olympia by divers nations or illustrious persons, for some victory or other fortunate event, having trophies and statues placed in them.

SATYRUS AND PYTHEUS

MADE the designs, and had the conducting of the superb tomb which the queen Artemisia,† perhaps more from vanity than grief, erected in Halicarnassus, to the memory of her husband Mausolus, king of Caria. These architects left a description of, and established the rules for such sort of monuments. The tomb has been considered one of the seven wonders of the world, for its size and the beauty of the architecture, as well as the quantity and excellence of the ornaments. Its celebrity has given the

* Pausanias, lib. vi. cap. 19. † Vitruvius, preface to book vii.

name of Mausoleum to all others that in any way resemble it. Mausolus,* king of Caria, having observed in Halicarnassus a situation on the sea-shore, in the form of a theatre, convenient for commerce, and naturally fortified, erected a palace there for his residence. It was constructed of brick, for greater strength, and stuccoed smooth as glass; the exterior ornaments were of Proconnesian marble. Near to the port was the great square, which on one side had the royal palace, and on the other the fortress, with the Temple of Mars, containing a colossal statue, the work of the excellent Telocaris and Timotheus; in another part, the Temple of Venus and Mercury, with the fountain of Salmacides, the waters of which, says the fable, caused those who drank of them to become enamoured. In the centre of this noble square was the Mausoleum, the circumference of which was 411 feet; the sides from north to south measured each 63 feet; the other two façades were longer. To these façades, for ornament, were attached thirty-six columns set in the walls, and a number of statues of surprising workmanship. The execution of the ornaments on the eastern side was confided to the famous Scopas, those on the south to Timotheus, the west to Leocares, and the north to Bryaxes. The work of these skilful sculptors greatly augmented the reputation they had already acquired; but what gave the greatest renown to this structure, was the pyramid which was raised under the direction of the ingenious architect Phyteus. This was composed of twenty-four steps; its top was crowned with a car drawn by four horses abreast, representing the chariot of the Sun; therefore its elevated situation was not improper. The whole was built of the most beautiful Grecian marble, and was 140 feet high. Fischer, in his treatise on historical architecture, gives both the description and design of it.

* Pliny, lib. xxxvi. cap. 6.

Phyteus* also built in Priene, now Palazzo, a temple to Minerva Polias,† of the Doric order; the remains‡ are still to be seen. The Ionic base is according to the description of Vitruvius.||

* Vitruvius, lib. i. cap. 1. † Pausanias, lib. vii. cap. 5.

‡ The Temple of *Minerva Polias*, although prostrate, is one of the remains of Ionian elegance and grandeur too considerable to be hastily or slightly examined. When entire, it overlooked the city, which was seated on the side of a mountain, on terraces cut out of the slope, descending in gradation to the edge of the plain. The communication from one terrace to another was by steps, cut in the solid rock, many of which are still remaining. The temple was surrounded by a *peribolus*, the entrance to which was through a *propyleum*, or gateway, and most probably the peribolus was surrounded within by porticoes. The plan of the temple is a parallelogram, 122 feet 6 inches by 64 feet 3 inches, measured on the upper step. There were eleven columns in the flanks, and six in the fronts of the temple. The walls of the cella ranged with the columns, and enclosed an area of 65 feet by 30 feet 9 inches; they are 4 feet in thickness.

The Ionic columns have bases raised on plinths, differing from the usual Greek mode. The columns are 4 feet 3 inches in diameter, and the intervals somewhat more than 7 feet 4 inches. The capitals of the angular columns shew a similar face in both fronts; the height of the column is not ascertained; the architrave was in height 3 feet 3.75 inches; the frieze, including the lower member of the cornice, 2 feet 7 inches 7-tenths, and the cornice on the flank 3 feet 4 inches 7-tenths; the upper diameter of the column 3 feet 6 inches 4-tenths.

There are other remains at Priene, near this temple, as an agora, a stadium, &c., all constructed with the marble of the mountain, which is of a greyish tint.—*Ionian Antiquities*.

|| Pytheus describes this temple in a written exposition; and it is recorded, he conceived so highly of his profession, as to assert in his commentaries, that it behoved an architect to excel more in all arts and sciences, than even the individuals who had carried each by their application and industry to the summit of reputation.

SCOPAS

WAS of Paros,* an island in the Egean Sea, a sculptor of the first class, as well as an eminent architect. He rebuilt, at Tegea, the Temple of Diana, called Alea, from Aleos, king of Arcadia, who caused it to be erected the first time. It was the most sumptuous of Peloponnesus, and was composed of three orders, Doric, Ionic, and Corinthian; but how arranged, it is not known. Pausanias† says, that the exterior was Ionic, and the interior, Doric and Corinthian.

PHILON, OR PHILO,

ONE of the most celebrated architects of his time, was commissioned by Demetrius of Phaleres, 330 years before Christ, to enlarge the ports and arsenal of the Pireus.‡ He succeeded so well in his undertaking, and in giving an account in the public assembly of what he had done, expressed himself with so much eloquence, purity, and precision, that the people of Athens, who were excellent judges in such matters, pronounced him equally a fluent orator and admirable architect. He erected various temples,|| and made *prostylos* the temple of Ceres and Proserpine, built by Ictinus, placing only columns in the

* Pausanias, lib. viii. cap. 45.

† Within the enclosure were galleries, probably supported by Doric and Corinthian columns, surrounding the hypæthros.

‡ Plutarch, Life of Sylla.

|| Vitruvius, preface to book vii.

front. By thus enlarging the vestibule, he not only added to the convenience of the initiated, but also to the majesty of the building. Philon, moreover, gave a design for, and commenced the theatre at Athens, which was afterwards finished by Ariobarzanes, and again rebuilt by Adrian. This theatre* was entirely of white marble; its greatest diameter was 248 feet, and that of the orchestra 117 feet. The Athenians used their theatres not only for tragic and comic representations, but also for their deliberations on public affairs. The remains shew the origin of this sort of edifices, and give an idea of the principal embellishments, which afterwards became still more redundant. Its steps in great part rest on the natural rock of the citadel, not having any other support. The theatre at Sparta is arranged in the same manner; as also that of Argos, in which the steps were cut in the hollow of the mountain. The Greeks improved this arrangement, but the Romans surpassed them in magnificence, making their theatres isolated, with colonnades on the upper step, for the convenience of the females, a custom which did not belong to the Greeks. Philon left exact descriptions of all his buildings, which were much esteemed, but they are now lost. Some suppose that this Philon was the same with Philones of Byzantium, who composed a treatise on warlike machines, which is now printed in the Louvre, and affixed to a manuscript in the library of the king of France.

* Stuart's Athens.

CHAPTER III.

FROM ALEXANDER THE GREAT TO AUGUSTUS.

300 B. C. to the Christian Era.

AT the period when Alexander enriched Greece with the spoils of the various nations he had subjugated, architecture shone in its fullest splendour; it was then introduced into Macedonia, where there still exists an ancient temple, now dedicated to St. Demetrius,* having more than 1,000 columns of the finest marble, jasper, porphyry, &c.; and from thence over the various countries which fell under the dominion of Alexander's successors. The wonders of Balbek and Palmyra,† the venerable ruins of which still remain, may belong to that period; and as their date is uncertain, it is here intended to give a slight sketch of them.

Balbek, anciently called Heliopolis, is by the Arabs reckoned among the wonders of Syria; and even European travellers, enchanted by its superb monuments, have found it difficult to express their admiration.

South of the city, which stands in a delightful plain at the foot of Mount Libanus, are the remains of various buildings, destroyed in latter times, some of the materials of which are now converted into a castle. Among the number is a rotunda built of marble, differing in its arrange-

* Pococke's Description of the East, vol. ii.

† From Wood's Balbek and Palmyra the dimensions in English feet and inches have been taken. Many of these were omitted, or incorrect, in our author.

ment from other buildings, and worthy of a description here. The cell is a circle 32 feet in diameter, and the wall which encloses it is of the same figure within and without. The exterior columns, in height equal to the diameter of the cell, are of the Corinthian order, on a stylobate, but so placed as to give a novel and peculiar character to the temple. An octagon is first set out, and at each of six points of the figure is placed a column 3 feet 1 inch in diameter, with a semicircular or concave entablature and stylobate connecting them; these columns are 9 feet from the face of the pilasters which are attached to the cell. The other three sides of the octagonal figure are cut off, for the purpose of attaching a tetrastyle portico, 50 feet in length, to form a façade. The outer intercolumniations are 8 feet 8 inches, the middle one being considerably the widest. The extreme columns of this portico complete five sides of the octagon. The spaces between the capitals of the pilasters round the cell are ornamented with festoons of flowers, held by boys, and between every two pilasters is an hemispherical-headed niche; of these there are five, which have contained statues. The doorway is 13 feet wide, and has the cornice of its entablature level with the astragal of the capitals; it is opposite to the middle intercolumniation, and is approached by twenty-one steps. The floor of the interior of the cell is level with the top of the stylobate; and within is an entablature, level with and resembling in all respects that of the exterior, having a swelled frieze, a cornice, with dentils, modillions, &c. A part of the stone dome remains above this. Around the lower part of the cell is a continued circle of fourteen detached Ionic columns, with a proper entablature. Above this are five tabernacles, each formed of two Corinthian columns on a pedestal; the entablatures have small pediments alternately circular and angular. Between these tabernacles are single isolated columns, with a portion of an entablature over them:

these columns, as well as those which form the tabernacles, are placed immediately over the Ionic below. The stylobate of the exterior is about 12 feet high; the whole order above 39 feet; the interior stylobate is 5 feet 6 inches high, and the Ionic order 12 feet; the shafts of the columns, as well without as within, are of one piece; and above the Ionic order of the interior is a modern roof, the lower part of the building being converted into a Greek church. One remark may be made upon the original dome,—that here it evidently springs from the wall of the cell, and it seems probable that a statue was placed over each column on the outside.

One temple, which by a species of miracle has resisted the injuries of time, is almost entire. Its plan is rectangular, and its length, measured on the face of the columns, is 222 feet, and 114 feet 7 inches in breadth. The vestibule occupied about 50 feet, and, with one of the principal sides, is now in ruins. The whole body of the temple is surrounded by a superb peristyle of Corinthian columns, which, with their entablature, and a plinth 1 foot 9 inches high, is 76 feet in height; their diameter is 6 feet 5 inches, and each is composed of three stones. The middle intercolumniation is 11 feet 6 inches, the others of the façade 8 feet 6 inches, and those at the flank 9 feet; the columns are distant from the wall of the cell about 9 feet 9 inches. Each side has fifteen columns, and each façade eight, including those at the angles; but it should be observed that the principal front has a double file. The architrave, frieze, and cornice, are of exquisite workmanship. In the soffite round the temple are the figures of gods, goddesses, and heroes, in a style by no means inferior to the rest of the work. The stylobate, 16 feet 6 inches high, is ornamented with a species of double frieze, in which are represented certain mysteries and ceremonies of paganism, with a wonderful variety of men and animals. The ascent to the portico is by thirty

steps, flanked by two walls, which are terminated so as to form pedestals. Behind the double file of eight columns which forms the portico, over which is a proportionate pediment, are four other columns, and then two pilasters of three sides, which advance from the body and terminate the walls of the cell; thus forming a spacious entrance. The jambs of the doors are of marble, richly sculptured, and the soffite of the architrave is ornamented with a large eagle in bas-relief, having its wings spread, and holding a caduceus in its talons: on each side is a cupid, supporting the end of a festoon of flowers, which hangs from the beak of the eagle; this is considered a fine piece of sculpture. The height of the door is 43 feet, its width 21. The interior of the temple now consists of a nave and two side aisles, resembling our churches, formed by two rows of fluted Corinthian columns,* 3 or 4 feet in diameter. On each of the side walls are six half columns, 4 feet 1 inch in diameter, and distant about 9 feet 4 inches from each other, forming seven compartments; they support a salient entablature; their bases rest on a stylobate 10 feet high, the bottom of which is level with the pavement of the outer portico. Each of these compartments, before mentioned, has a recess with an arched head, 15 feet high, a small tabernacle with Corinthian columns, and a triangular pediment, with other embellishments in marble over it. Towards the western extremity of the great nave is an ascent by thirteen steps to a species of choir, separated from the rest of the temple by two large pilasters, forming a magnificent division, and corresponding in style with the other parts. The same architecture is continued throughout the choir, with the difference only, that the pilasters are without pedestals, and the recesses descend to the pavement. At this end was

* These two rows of columns are supposed by Mr. Wood not to have been original, and are omitted in his plan of the temple.

placed the principal divinity. The whole of this portion of the temple is ornamented with festoons, birds, flowers, fruits, tritons, fish, and marine gods, admirably sculptured. The roof is a bold and daring effort, divided into compartments, ornamented with sculpture; it is open in the centre, but we cannot say whether so originally. The whole is supported by large vaults, which probably formed a subterraneous temple. There are still sufficient vestiges to prove its having formerly been surrounded by a number of superb edifices. Among these are the ruins of a palace, which in magnificence must have equalled any in the world. A large wall enclosed both it and the temple, constructed of such immense stones, that the tradition of the country does not surprise us, which attributes the whole to the agency of some supernatural power. There are three in particular placed near each other, which form together a length of 183 feet, each being more than 60 feet long, 12 wide, and as many deep; and, what is still more extraordinary, they are raised 30 feet from the ground; nor do any of the others differ much in size from them.

The great temple is approached by a flight of fifty-one steps, which conduct to an open portico of twelve columns, in length about 180 feet, and in depth 36 feet 10 inches. At each end of this portico is a room, 38 feet by 31, which gives an additional length to this noble façade. The walls which form these rooms are faced with pilasters, four on each front, and 3 feet and a half on the returns. As the flight of steps does not extend beyond the open portico, a stylobate, 24 feet in height, or level with the top step, is continued at each end; on this is a plinth, 3 feet 6 inches high, on which rests the order, which is 52 feet in height; the diameter of the columns 4 feet 3 inches. The middle intercolumniation is 11 feet 6 inches, that on each side 11 feet, and each of the others 9 feet 6 inches. The height of the entablature is 10 feet 4 inches and a half; the architrave is enriched, the frieze

plain, the cornice has modillions, dentils, &c. Above this entablature is placed an attic, 10 feet in height, with pilasters over those below as well as over the columns. Within this portico and the rooms at the end are two ranges of tabernacles, one above the other: these are interrupted by three doors; the middle one, considerably the largest, being 17 feet wide and 31 feet high; those at each side, or opposite the third intercolumniation from the middle, are but 18 feet high and 10 feet wide. Passing through these, you enter an hexagonal court, two sides of which are considerably longer than the others: the extreme diameter extends as far as the façade of the principal front: the depth from back to front is about 146 feet. There are porticoes built round five sides of this court, adorned with columns, and having tabernacles in two stories on the walls within. Between these porticoes, which are 63 feet long, and which have each four columns, 2 feet 9 inches diameter, placed on pedestals, are other rooms of square and irregular forms, from their being obtained in the angles of the hexagon. Above the order is a similar attic to the one before described on the exterior. Through the side opposite to that entered from the principal front you pass into a large quadrangular court, 374 feet long and 368 feet wide, having similar porticoes around three sides. The order of these two courts is 33 feet 6 inches high, and the frieze is ornamented with festoons of fruit and flowers, suspended from ox-sculls, and small masks between them in bold relief. At the extremity of the quadrangular court is the great temple, nine columns only of which remain with their entablature over them. Originally there were ten in front and nineteen on the flanks, counting the angles twice. The extreme length is 285 feet, the breadth 157 feet; the diameter of the columns 7 feet. The whole height of the order, including the plinth, is 87 feet. The bases are attic; the shafts, which consist of three pieces, plain; the

capitals a beautiful Corinthian. The frieze is ornamented with inverted trusses, with heads and masks over each, and festoons of flowers between them: the cornice is very much enriched.

The Corinthian order predominates every where, and to grandeur of architecture is united the beauty of sculpture, though the latter is often curious in its design. There are innumerable statues, busts, trophies, niches of exquisite workmanship, bas-reliefs, caryatides, termini; all which once embellished these now melancholy ruins. Beneath these edifices are vaults, formed into halls and large apartments, to which you descend by marble steps, where are tombs of the same material. The walls are encrusted with sculptures and niches, and are built of enormous stones, united without cement. Such are the principal remains of Balbec, which may vie with the most stupendous works of architecture either in Egypt, Athens, or Rome.

Palmyra,* a city of Syria, not far from the Euphrates, called in the sacred writings, and also by the Arabs and Turks, Tadmor of the Desert, offers to the curiosity of the traveller objects equally interesting. It is situated in a vast plain, surrounded on three sides by a long chain of mountains. The air is salubrious, but the soil sterile

* Gibbon's *Decline and Fall of the Roman Empire*, vol. ii. p. 139. Palmyra insensibly increased into an opulent and independent city; for, being situated between the Gulf of Persia and the Mediterranean, it was frequented by the caravans which conveyed the commodities of India to the nations of Europe in the time of the Romans. Palmyra connected the Roman and Parthian monarchies by the mutual benefits of commerce; and after the victories of Trajan, this little republic, for 150 years, flourished as a colony to the imperial city. It was during this period, as we learn from many inscriptions, the temples, palaces, and porticoes, were constructed by the wealthy Palmyrenians. These sumptuous buildings were destroyed about A.D. 273, by the emperor Aurelian, when he conquered Zenobia, and plundered the city. Some English travellers, about the end of the seventeenth century, discovered the ruins.

and barren of every kind of plant, except a few palm-trees. The ruins denote it to have been an extensive and ancient city, but it is now reduced to thirty or forty miserable huts, built within a vast court, which formerly contained a magnificent pagan temple. It is enclosed by a wall 74 feet high, each side of which is about 730 feet long: that on the north and south has externally thirty-one Corinthian pilasters, standing on a continued stylobate, and supporting a regular entablature; that on the east has thirty-four similar pilasters: between every two of these is a window, highly decorated. On the west side is a flight of steps and a portico of ten columns, which conducts to the interior of the court. The Turks have destroyed the entablature, but some remaining fragments shew with what exquisite workmanship it was ornamented: two friezes in particular, 35 feet long, are sculptured with vine leaves and grapes, almost equal to nature. In this same court are fifty-eight marble columns, which, with their entablature, measure 59 feet in height. Their number was originally much greater, as they formed a single portico on the west side, and a double one on the other three. In the centre nearly of this court was an octastyle temple, with fifteen columns on the flanks; it measured in length, on the top step, 200 feet, and in width 112 feet. The walk round the cell was very spacious, being 22 feet 2 inches, and the intercolumniation only 9 feet 6 inches. The cell is about 133 feet by 44, and is entered, in a different manner to most temples, on the west or long side, through the sixth intercolumniation, reckoning from the north. There is an outer door opposite to this attached to the columns of the peristyle. The soffit of the inner one was ornamented with an eagle, resembling that at Balbec. The order, including its plinth and entablature, is in height 65 feet; the columns were fluted, and had metal leaves, &c. attached to the drums of the capitals, as the drilled holes indicate.

Of this temple, now used as a mosque, the walls only remain; in which are windows, of a moderate size, rather wider below than above, and very much ornamented with sculpture. In the middle is a cupola 6 feet in diameter, and formed out of one block.

Every part around the enclosure, for the space of a mile, is covered with a confusion of broken columns, but their original destination it is impossible now to determine. A triumphal arch leads to a portico half a mile in length and 40 feet in width, formed by two ranges of marble columns 26 feet high; 129 of these still remain, but there appear to have been at least 560. On the greater number are inscriptions in Greek and Palmyrene characters; whence we may conclude this to have been the most frequented part of the city, and that the pedestals which project from the shafts of the columns supported statues in memory of those who had deserved well of their fellow-citizens. A little distance from the portico are the ruins of an edifice, composed of marble, more beautiful than that of the portico; the columns are 22 feet high and 8 feet 9 inches in circumference. It appears to have been a banqueting hall.

On the other side of the portico are doors, supposed to have communicated with the court of the palace. Two of them are still remaining, and convey to us an idea of their former magnificence; they are ornamented with four porphyry columns, 30 feet high and 9 feet in circumference. An immense number of columns prostrate amidst the fragments of walls, lead us to conjecture that the palace was in front of this, and surrounded by other porticoes.

Opposite to the portico is a forest of marble columns, heaped one on the other, which set imagination at defiance. Amidst this desolation, in a street towards the north, and extending more than a mile, are many marble sepulchres, in the form of high towers, some

of four and others of five stories, which at a distance resemble the ruined steeples of churches.

These ruins sufficiently demonstrate the ancient splendour of Palmyra, and its entire destruction will ever disgrace the page of history. This city was also celebrated for having been the birth-place of those two illustrious personages Zenobia and Longinus.

In Syria was, besides, Hieropolis, or the Holy City, sometimes called Magog, in which was the famous temple dedicated to the great goddess of Syria, surrounded by a court four or five hundred feet in circumference. The architects of all these eminent works are unknown, and we have no very satisfactory accounts of any that flourished in the time of Alexander or his successors.

DINOCRATES,

A skilful and ingenious architect of Macedonia,* who, provided with recommendatory letters to the principal persons of Alexander's court, set out from his native country with the hope of gaining, through their means, the favour of the monarch. The courtiers made him promises which they neglected to perform, and framed various excuses to prevent his access to the sovereign; he therefore determined upon the following expedient:— Being of a gigantic and well-proportioned stature, he stripped himself, anointed his body with oil, bound his head with poplar leaves, and throwing a lion's skin across his shoulders, with a club in his hand, presented himself to Alexander, in the place where he held public audience.

* Vitruvius, pref. lib. ii.

Alexander, astonished at his Herculean figure, desired him to approach, demanding, at the same time, his name:—"I am," said he, "a Macedonian architect, and am come to submit to you designs worthy of the fame you have acquired. I have modelled Mount Athos in the form of a giant, holding in his right hand a city, and in his left a shell, from which are discharged into the sea all the rivers collected from the mountain." It was impossible to imagine a scheme more agreeable to Alexander, who asked seriously whether there would be sufficient country round this city to maintain its inhabitants. Dinocrates answered in the negative, and that it would be necessary to supply it by sea. Athos consequently remained a mountain. This city, projected by Dinocrates, might have been furnished with provisions by cultivating the arms, the head, the stomach of the statue; and supposing that not possible, they could have been obtained from other countries, and the city supplied, like Venice, from distant parts. Whoever has the curiosity to see this design of Dinocrates, must refer to the History of Architecture, by Fischer. Diodorus Siculus* says, that Semiramis had the mountain Bajitanus, in Media, cut into a statue of herself, 17 stadii high, surrounded by 100 others, probably representing the various members of her court. China, among its other wonders, has many mountains cut into the figures of men, animals, and birds. It is most probable that all the sculpture of this description in that country, described by travellers, originates in fancy, as the clouds, the sound of bells, or the spots in the sun's disc, alter according to the imagination of those who contemplate them. Dinocrates, however, was usefully employed in the foundation of Alexandria,† and few architects ever had to direct a work of such vast importance. The situation was well chosen for a commercial city,

* Lib. ii. cap. 1.

† Pliny, lib. v. cap. 10.

being surrounded by a country the most productive in Egypt, with an internal navigation by means of the Nile, a natural, spacious, and secure port in the Mediterranean, and, in short, all the requisites to render it the grand emporium of Africa, Asia, and Europe. It was surrounded by walls of immense circumference, fortified with towers; it had also aqueducts, fountains, canals, a prodigious number of houses for the inhabitants, squares, edifices for the public games, temples and palaces, so magnificent and spacious that they almost occupied a third of the city. It is believed that Dinocrates rebuilt the Temple of Diana at Ephesus, that he erected another in Alexandria, in honour of Arsinoë,* sister and wife of Ptolemy Philadelphus. The whole interior was to have been incrusted with loadstone, in order that the statue of the princess, composed of iron, should be suspended in the centre, but at the death of King Ptolemy, and of the architect, this idea was abandoned, and has never been executed elsewhere, although a similar fable was invented of the tomb of Mahomet. He also directed the funeral obsequies of Hephæstion,† which cost 12,000 talents.

SATYRUS AND PHŒNIX

FLOURISHED under Ptolemy Philadelphus, but all that is known of their works is, that one of them made a canal, lined with stone, for the purpose of conveying to Alexandria an obelisk, ‡ sculptured by command

* Pliny, lib. xxxiv. cap. 14.

† Plutarch, Life of Alexander.

‡ Pliny, lib. xxxvi. cap. 9, describes the method adopted in removing this obelisk, which was 80 cubits high: two vessels were loaded with

of Nectabis, an ancient king of Egypt, and raised it in the centre of the city.

SOSTRATUS,

ONE of the most celebrated architects of antiquity,* and so esteemed by Ptolemy Philadelphus that he was surnamed “the friend or favourite of kings.”† Lucian speaks of one Sostratus, an engineer, who himself defeated the whole army of Ptolemy, and obliged the city of Memphis to surrender without an attack, by simply turning the course of the Nile: we are ignorant if this was the same Sostratus.

Among the different works of this architect‡ were the celebrated passages, or rather terraces, which he constructed in Cnidus, his native country; but his greatest was the light-house in the isle of Pharos,|| considered one of the wonders of the world, which cost more than half a million of crowns. It was a species of tower, which Ptolemy caused to be erected on the summit of a rock in the above-mentioned island, then near a mile from Alexandria, 450 feet high, and could be seen at a hundred miles distance, consisting of several stories, each decreasing in size; at the top was a species of lantern, where fires were lighted at night to guide the coasting vessels. The ground story was hexagonal, the sides alternately concave and convex; each was a stadium long, that is, the eighth of a mile: the second and third stories

stone a foot square, equal to twice the weight of the obelisk, and floated under it as it lay across a canal; the stones were then taken out, and the vessels rose up with the freight intended for them.

* Strabo, lib. xvii.

† Dial. Hippici.

‡ Pliny, lib. xxxvi. cap. 12.

|| Strabo, lib. xvii.

were of the same form; the fourth was a square, flanked by four round towers; the fifth was circular. A magnificent staircase led to the top. The whole building was of wrought stone, and not only served for the convenience of navigation, but also as a defence to the port, for which purpose it was surrounded by a wall, following the outline of the rock. On the Pharos, was this inscription in Greek:—“Sostratus of Cnidus, son of Dexiphanes, to the gods the saviours, for the benefit of sailors.” Some accounts state that Sostratus, after having secretly covered this inscription with cement, placed over it another in honour of Ptolemy, which, in a few years, mouldered away and shewed the first; while others maintain that Ptolemy left the inscription to the will of the architect, and that by the gods protectors was understood the king and queen, and their successors, who were ambitious of the title of Soterus, or Saviour.

Dexiphanes, a Cyprian, who lived at the time of the famous Cleopatra, the last queen of Egypt, restored this Pharos, and by means of a jetty united it to the continent, a short time before the Christian era; for this the queen rewarded him with the important office of director of all the buildings she was then erecting. From the accumulation of mud thrown up by the Nile, the Pharos has long ceased to be an island.

The same Ptolemy Philadelphus,* desirous of encouraging the growth of science and the fine arts in his peaceful kingdom, added to the Temple of Serapis, the most beautiful and magnificent of that time, except Jupiter Capitolinus, a library which contained 700,000 volumes. The architect of these two great works is unknown. This incomparable library was destroyed, A. D. 642, by the Caliph Omar, and the books served instead of wood to heat the baths for six months. There is said to be a

* Strabo, lib. xvii.

prodigious collection of books in the monastery of St. Croix, on Mount Ararat, in Ethiopia. Antonio Brieo and Lorenzo of Cremona, who were sent into these countries under Gregory XIII., saw this immense collection, containing 10,100,000 volumes, all written on fine parchment, each kept within beautiful silken covers. Its origin has been attributed to the queen of Sheba, who, among the presents made her by Solomon, received the works of Enoch on the elements, and other philosophical subjects, all the 100 books written by Noah on mathematics and the sacred writings, the treatises which Abraham composed on philosophy and taught in the valley of Mamre, and with those the books of Esdras, the Sibyls, the Prophets, the chief Hebrew priests, and those composed by the learned queen herself; all which is attested by the Father Kirker, as well as by a number of other literati. But we cannot credit this statement.

After the first Ptolemies, architecture began to decline in Greece, in consequence of the wars which devastated the whole country; and at that time flourished in Egypt, as Philopater* sent 100 architects with rich gifts to Rhodes, which had been injured by an earthquake; and his father, Euergetes, after the victory gained over Antiochus, returned into Egypt with 2,500 statues, many of which had been erected under Cambyses: but this prosperity only lasted in Egypt under the three first Ptolemies.

* Polyb. lib. v. cap. 9.

COSSUTIUS

(B. C. 200)

Was one of the first Roman architects* who followed the manner of the Greeks, and acquired such fame that Antiochus the Great, B. C. 196, selected him to finish the Temple of Jupiter Olympius at Athens. Cossutius is said to have excelled in the proportions which he gave to the cell, and in the arrangement of columns after the dipteral form, as also for the elegance and knowledge he displayed in the Corinthian order. He composed a treatise on what he had executed, following the custom of the Grecian architects; but before the time of Vitruvius this treatise was lost. It appears extraordinary that we have no previous notice of any Italian architects, when it is known that the Tuscan order, or rather the simple Doric, was introduced very early into Italy, and that Porsenna, king of Etruria, had a tomb erected for his family near Clusium, which was of stone, and very similar to the labyrinth of Crete. If we are to rely on Varro, the stones of this monument were each 30 feet wide and 50 feet long, and at the top were five pyramids, 75 feet wide and 150 feet high. It is said † that under Tarquinius Priscus Rome was surrounded by a wall of stone, and that the magnificent subterraneous conduit, called the Cloaca Maxima, was constructed.

Under the same king was commenced the Temple of Jupiter Capitolinus, which was finished at a great expense in the time of Tarquinius Superbus, who, for this purpose, had the best artists from Etruria. Whatever may be

* Vitruvius, lib. vii. pref.

† Livy, lib. i. cap. 55.

said of these and other works, it is certain, that before the Romans made war out of Italy, they had as a body no other feeling than a love for their country, which was sometimes the excuse for plundering the neighbouring nations and dividing the spoils in common. Rome, for more than a century, was the school of discipline, frugality, and policy, but not of arts and sciences. Her buildings at this early period were large and solid, though neither beautiful nor ornamental; but when the Romans visited the cities of Greece, their minds became cultivated, their taste improved, and the genius which presided over Grecian architecture removed her seat to the imperial city.

HERMODORUS OF SALAMIS

(B.C. 100)

ADDED to the Temple of Jupiter Stator* a peripteral portico, by order of Posthumus Migellus, with six columns to each façade, and eleven at the flanks, comprising those of the angles. The distance of these columns from the wall of the cell was equal to their intercolumniation. It is thought that Hermodorus built the Temple of Mars in the Circus Flaminius, and perhaps it is of him that Cicero † speaks in his orations, as the most proper person to construct a sea-port.

* Vitruvius, lib. iii. cap. 1.

† Cicero, lib. i. cap. 14.

SAURUS AND BATRARCHUS

WERE both Lacedemonians, and built, at their own expense, certain temples at Rome,* which were afterwards enclosed by Octavius; but not being allowed to inscribe their names, they carved on the pedestals † of the columns a lizard and a frog, which, in fact, implied them. The columns are now in the monastery of St. Eusebius at Rome, or in the church of St. Lorenzo, without the walls.

C. MUTIUS,

(B.C. 100.)

AN architect, who constructed the Temple of Honour and Virtue ‡ at Rome, near the trophies of Marius. The ancient ruins near St. Eusebius are supposed to be the remains of this temple. It was peripteral, || but without a posticus. The true laws of the art were exemplified in the cell, the columns, and the entablature; and had it been built of marble, or the richness of the material suited to the delicacy of the work, it would have been one of the most sumptuous and celebrated of antiquity.

* Pliny, lib. xxxvi. cap. 5.

† In the church of St. Lorenzo are two Ionic capitals, with a lizard and frog carved in the eyes of the volutes, which are probably those alluded to, although the word *pedestal* is mentioned.

‡ Vitruvius, lib. iii. cap. 1.

|| Ibid. pref. lib. vii.

Silver medals are said to have been struck in memory of this work. It probably was divided into two parts, and may be the same erected by that Marcellus,* called the Sword of Rome, who was five times consul, and at the taking of Syracuse is said to have shed tears, and to have much esteemed Archimedes, notwithstanding the resistance he made against him. This Marcellus conceived the idea of erecting a temple to Honour and Virtue, dividing it into two parts, so placing them that it was necessary to pass through that of Virtue to gain that of Honour. In this temple the senate passed the decree for the recalling of Cicero, which ran thus:—
 “ In Templo Honoris et Virtutis honos habitus esset virtuti.”

VALERIUS OF OSTIA,

ONE of the chief architects and engineers of his time. He executed many considerable works, which are unknown to us. He first invented the manner of covering † the theatres, when Libo the Edile exhibited spectacles to the Roman people.

This is all the information we have of the Roman architects who flourished in the time of the republic: this may be attributed to the loss of many writings which mentioned them. But for Vitruvius, ‡ we should still be ignorant of the names of many Latin authors who wrote on architecture. Fussitius was the first Roman who composed a work on the proportions of the orders.

* Livy, lib. xxvii. cap. 25. † Pliny, lib. xxxvi. cap. 15.

‡ Preface, lib. vii.

Terentius Varro left a treatise on this art. One Publius Septimius wrote two books on the same subject; and Cornelius Celsus, although possessed of very common talents, wrote on civil and military architecture. To supply this sterility, we have recourse to medals and ancient fragments, but we learn only from them the names of Lucius, a Roman, of Marcus Valerius Artema, a freedman of Menandrus, and of Demophanes, Greeks.

CHAPTER IV.

FROM THE REIGN OF AUGUSTUS TO THE
DECLINE OF ARCHITECTURE.

From the Beginning of the Christian Era to the Fourth Century.

THE reign of Augustus* was the golden age of science and the fine arts. Grecian architecture at that period was so encouraged at Rome, that Augustus could with reason boast of having left a city of marble where he had found one of brick. In the time of the Cæsars,† fourteen magnificent aqueducts, supported by immense arches, conducted whole rivers to Rome, from a distance of many miles, and supplied 150 public fountains, 118 large public baths, besides the water necessary for those artificial seas in which naval combats were represented: 100,000 statues ornamented the public squares, the

* Among the many edifices constructed at Rome in the time of Augustus, may be enumerated the Temple and Forum of Mars the Avenger, the Temple of Jupiter Tonans, and that of Apollo Palatine, with public libraries; the Portico and Basilica of Caius and Lucius, the Porticoes of Livy and Octavia, and the Theatre of Marcellus: and during the emperor's residence in Spain, Agrippa, at his own expense, built the Porch and Temple of Neptune, the hot baths called *Thermæ Agrippæ*, and the magnificent Pantheon; its portico is generally allowed to be "the most sublime result that was ever produced by so little architecture." He also conveyed the waters Virgo, Julia, and Tepula, to Rome, by aqueducts of stupendous length, decorated with large and beautiful columns of marble, besides repairing those which brought the waters Appia and Marcia to the city. See *Suetonius in August. Cassiod. lib. vii. epist. 6. Front. in Aqueduct. &c. &c.*

† Roma Antica Nardini.

temples, the streets, and the houses; 90 colossal statues raised on pedestals; 48 obelisks of Egyptian granite, besides, adorned various parts of the city: nor was this stupendous magnificence confined to Rome, or even to Italy. All the provinces of the vast empire were embellished by Augustus and his successors, by the opulent nobles, by the tributary kings, and the allies, with temples, circuses, theatres, palaces, aqueducts, amphitheatres, bridges, baths, and new cities. We have, unfortunately, but scanty memorials of the architects of those times; and, amidst the abundance of magnificent edifices, we search in vain for the names of those who erected them. However much the age of Augustus may be exalted, we cannot think it superior, or even equal to that of Alexander: the Romans were late in becoming acquainted with the arts; they cultivated them more from pride and ostentation than from feeling. Expensive collections were frequently made, without the possessors understanding their value; they knew only that such things were in reputation, and, to render themselves of consequence, purchased on the opinion of others. Of this, the Roman history gives frequent proofs. Domitian squandered seven millions in gilding the Temple of Jupiter Capitolinus only, and had from Athens a number of columns of pentelic marble, extremely beautiful, and of good proportion, but which were recut and repolished, and thus deprived of their symmetry and grace. If the Romans did possess any taste for the fine arts, they left the exercise of it to the conquered—to Greece, who had no longer her Solon, Lycurgus, Themistocles, and Epaminondas, but was unarmed, depressed, and had become the slave of Rome. “*Græcia capta ferum victorem cepit.*” How poor are such triumphs to those gained by the fine arts! The means by which Greece acquired and maintained such excellence, is worthy of an inquiry. It is generally allowed

that climate and government have a powerful influence on the intellect. Greece was peculiarly favoured in these two points; her atmosphere was serene and temperate, and being divided into a number of small, but independent states, a spirit of emulation was excited, which continually called forth some improvement in the liberal arts. The study of these formed a principal branch of education in the academies and schools, to which none but the free youth were admitted. To learning alone was the tribute of applause offered. At those solemn festivals to which all Greece resorted, whoever had the plurality of votes was crowned in the presence of the whole assembly, and his efforts afterwards rewarded with an immense sum of money; sometimes a million of crowns. Statues, with inscriptions, were also raised to those who had thus distinguished themselves, and their works, or whatever resembled them, for ever after bore their names; distinctions far more flattering than any pecuniary reward. Meticus gave his to a square which he built at Athens, and the appellation of Agaptos was applied to the porticoes of the stadium. Zeuxis, when he painted Helen, collected a number of beautiful women; as studies for his subject: when completed, the Agrigen-tines, who had ordered it, were so delighted with this performance, that they requested him to accept of five of the ladies. Thebes, and other cities, fined those that presented a bad work, and looked on them ever afterwards with derision. The applause bestowed on the best efforts, was repeated by the orators, the poets, the philosophers, and historians: the cow of Miron, the Venus of Apelles, and the Cupid of Praxiteles, have exercised every pen. By these means Greece brought the fine arts to perfection; by neglecting them, Rome failed to equal her; and, by pursuing the same course, every country may become as refined as Greece.

VITRUVIUS POLLIO

Was neither born at Verona nor at Placentia, as some have imagined, but at Fornia, now called Mola di Gæta. He lived in the time of Augustus, who gave him a pension for life, and to whom Vitruvius, then advanced in years, dedicated his celebrated work on architecture, the only one of antiquity remaining, and without which we should be even ignorant of his name. This elaborate treatise gives the rules of Grecian architecture, and, uniting history, acquaints us with the names of many ancient architects and their works. The perusal of that part of his writings* in which he treats of the requisite qualities of an architect, should cause those to blush who pursue the profession solely for the purpose of profit, and who are guided by no other feeling than interest. Would that the lessons of our author might excite regret in such men, and induce them to follow it from motives of honour! Vitruvius may be regarded as the father of architecture, and well deserving those comments and translations that have been published, among which, that of the Marquess Galiani has excelled every other: it should be the study of all who wish to acquire taste and sound architectural knowledge. Many defects have been pointed out in this author, but in no human performance can we expect to find perfection.

“Whoever thinks a faultless piece to see,

Thinks what ne'er was, nor is, nor e'er shall be.”

We do not for certainty know of any edifice in which

* Vitruvius, lib. i. cap. 1. pref. lib. vi.

Vitruvius was employed: it has been asserted that he designed the Theatre of Marcellus, but its arrangement is not consistent with his precepts; he disapproved of dentils in the Doric order, which are used in this theatre. He mentions* his having built the basilica, or Temple of Justice in Fano, which he thus describes: The central nave was 120 feet long and 60 wide, supported by 18 Corinthian columns 50 feet high; the lateral naves were 20 feet wide, and it is to be observed, that to these were attached pilasters 20 feet high, 2 feet and a half wide, and 1 foot and a half thick; on these were laid the beams of the floor; above these pilasters were others 18 feet high, serving as supports to the soffit, which was lower than that of the great nave: the space between the intercolumniations above the architrave of the pilasters served for windows: opposite to one of the principal sides was the tribunal, in the form of a semicircle 46 feet wide, and sunk 15 feet, in order that the merchants in the basilica should not impede those who were before the magistrates. Vitruvius allowed the proportions of the orders to be occasionally changed; we cannot, however, accede to his doctrine of making the shaft of the Ionic equal to the Corinthian, because each order has to maintain its own particular character, and consequently each of its parts ought to have dimensions different from those of the other orders. His writings appear to some readers dry and too minute: certainly the study of his work alone is not all that is requisite to form an architect. He was learned both in civil and military architecture; the latter he reduced to very simple principles. At length, overcome by the jealousies of his contemporaries, he took refuge in philosophy, and gave himself up more to study than to practice. We are not informed that he ever visited

* Vitruvius, lib. v. cap. 1.

Greece, so that he must have acquired a knowledge of her architecture entirely from books. If we can judge of authors by their works, he was a man of excellent morals.

VITRUVIUS CERDO,

A FREEDMAN of Lucius, erected at Verona* (said to be his native country) a beautiful triumphal arch,† called of the Gavii, of the Corinthian order. In the entablature were modillions and dentils, which were too much disapproved of by the great Vitruvius for it to have been, as some suppose, his design. The arches called triumphal were not always erected for victories gained by sovereigns or their generals; that of Verona was for four of the Gavii family, and was not improbably their sepulchre. Many raised by Domitian, and other sovereigns, in the Campagna and elsewhere, were certainly not for triumphal memorials, but for some important benefit rendered to the public, or from vanity.

There is no country in which these arches are so numerous as in China: they are found not only in the cities, but on the mountains, and are erected in the public streets in honour of princes, generals, philosophers, and mandarins, who have benefited the public, or signalled themselves by any great action: there are more than 1100 of these latter, 200 of which are of extraordinary size and beauty: some in honour of females. The Chinese annals reckon 3636 men who have merited triumphal arches: they have a large gate in the centre, and some three, the lateral ones being the smallest; many

* Grut. p. 186. Inscrip. 4.

† Antiq. Veron. p. 21.

are of wood, with pedestals of marble; the most ancient are the finest, and are well sculptured with flowers and animals. Since the last conquest, the genius of the Chinese has become much debased: their architecture in general is much inferior to ours, both in proportions and in the distribution of the parts, having neither capitals nor cornices. The friezes are of a great height, and ornamented with sculpture: the highest arches are 25 feet, embellished with human figures, animals, flowers, grotesque forms in various attitudes and in full relief.

C. POSTHUMIUS AND L. COCCEIUS AUCTUS

WERE both freedmen, and celebrated architects: the second, a disciple of the first, was employed by Agrippa in various works about Naples, near which city he cut through the mountain* now called the Grotto of Pozzuolo;† there is at the same place an ancient temple of marble, of the Corinthian order, dedicated to Augustus,‡ now to St. Proculo, which is supposed to have been built by the same L. Cocceius. From some inscriptions, the names have been discovered of C. Julius Posphorus, son of Lucifer, of C. Licinius, Alexander, Sextus, Pompeius, and Agasius; and this is all that we know of the architects of the time of Augustus, a period the most fruitful in works and artists. Caligula expended immense trea-

* Strabo, lib. v.

† Its length is nearly three quarters of a mile, its breadth about 24 feet, and its height unequal. It is paved with large flags of lava, and is lighted by two circular apertures bored through the mountain, and at night by lamps.

‡ Scipio Mazzela, Antiq. di Pozz.

tures in erecting temples to his own honour, in vainly endeavouring to cut through the Isthmus of Corinth, in enlarging the imperial palace at Rome, and in that whimsical bridge at Baia, in imitation of the celebrated one of Xerxes. The emperor Claudius undertook works not less useful than bold; such as drawing off the water from the lake Fucino, which Augustus had not dared to attempt; constructing the port at Ostia, in which Julius Cæsar failed, and which was necessary to protect the fleets that brought corn from Africa and Asia, for the purpose of supplying the city in the times of scarcity. Claudius completed this port with true Roman magnificence.

CELER AND SEVERUS

WERE the architects employed by Nero,* after the great conflagration of Rome, in the construction of his golden house, which surpassed all that was stupendous and beautiful in Italy, and proclaims the extravagance of the emperor as much as any thing else he undertook. His statue, 120 feet high, stood in a court ornamented with porticoes of three files of lofty columns, each file a mile long: the gardens were of vast extent; with vineyards, meadows, and woods, filled with every sort of domestic and wild animals: a pond was converted into a sea, surrounded by a sufficient number of edifices to form a city: pearls, gems, and the most precious materials were used every where, and especially gold, the great profusion of which, within and without, and even on the roofs, caused it to be called the

* Tacitus, Ann. lib. xv. cap. 42.

golden house: the essences and perfumes continually shed around, shewed the extreme extravagance of this inhuman monster, who, for the purpose of gratifying his pleasures, seized on the wealth of others. Among other curiosities was an eating-room,* in which was represented the firmament constantly revolving, imitative of the motion of the heavenly bodies; from it was showered down every sort of odoriferous water. Nero did not complete this palace, as the first order of Otho was the sum of 90 millions of sesterces for the finishing it. The ground not occupied by it, † was left to the inhabitants of Rome to build their houses on, which were not rebuilt in the same manner as after the conflagration by the Gauls; the streets were made more spacious, the squares widened, and surrounded by porticoes. The emperor published many wise regulations to prevent the repetition of a misfortune which some imputed to him. At a certain height, wood was not permitted to be used, but stone from Alba, ‡ or Galba, as the most likely to resist fire; reservoirs were provided, and persons constantly ready to render the most prompt assistance in case of accident; the houses were to be a certain distance from each other, and they were to have no wall in common. These regulations rendered the city more beautiful, more commodious, and more secure; nevertheless, the wide streets were objected to as not affording sufficient shelter from the sun; but it is usual to condemn all that is new, particularly if the projector is disliked, as if the vicious could not do any thing that was good. Suetonius assures us, that Nero intended to extend the walls of Rome to

* Suet. cap. 31, and in Oth. cap. 7.

† Tacitus, lib. xv. cap. 43.

‡ Vitruvius, lib. ii. cap. 7, says, that the Alban and Gabian stone was not the hardest, but it resisted fire; while the stone from other quarries was apt, when heated, to crack and fly off in fragments.

Ostia, and afterwards, by means of a canal, conduct the sea to the Seven Hills, an idea very likely suggested by these two architects, who were great projectors, and who undertook to make a canal from lake Avernus to the Tiber. This canal was to be 160 miles long, and sufficiently wide to admit of two vessels abreast; all the prisoners were collected, immense treasures were exhausted in cutting through mountains, but the obstacles they met with dispirited them, and the work was relinquished: the motive was ridiculous, being only to prevent the vessels from doubling cape Misenus. His great palace was but of short duration; the good emperor Vespasian restored to the people the lands which Nero had taken from them, and thus the golden house disappeared like one of the enchanted palaces of Tasso and Ariosto; and in its place arose the mighty Colosseum* and the magnificent Temple of Peace. His son Titus, the delight and love of human kind, erected baths and other edifices, and rebuilt Rome, which was in a great measure destroyed by a fire that burned three days and three nights, supposed to proceed from the earth.

* It may justly have been called the most imposing building, from its magnitude, in the world. It is of an oval form, the longest diameter 620 feet, and the transverse 513 feet 5 inches, measured from the outer face of the walls, from which the columns project 1 foot 10 inches. The clear width of the present arena, which originally was somewhat less, is 180 feet 3 inches, and its length 287 feet. There were eighty arched openings round the ellipsis, the four at the extremities of the two diameters are the widest: the whole height of the external wall is 157 feet 6 inches, and decorated with the four orders. It was commenced by Vespasian, and finished by his son Titus, about A. D. 79. In 1813, the ground was excavated within the arena, and many substructions, inscriptions, columns, marble seats, and other fragments belonging to the buildings, were discovered. The materials used in its construction are travertine and other stone for the principal walls and piers, tufo, brick, tile, &c. for the rest. It is now a very picturesque ruin, though probably not half the original building can be said to remain.

But out of such abundance of sumptuous edifices there has not remained the mention of a single architect. From some inscriptions, we learn this useless information, that Claudius Vitalis, architect, died at forty years of age; that Philip, an excellent architect, was buried at Nismes; that C. Sivius Lupos, a Portuguese, built a temple in honour of Augustus, on a rock at the mouth of the Corrunna, in Portugal; and that Apuleius erected one at Tarragona, in Spain, to Diana “The Mother.”

RABIRIUS

(A. D. 80.)

WAS considered one of the most learned architects* of his time, and was employed in many works by Domitian,† who was a great promoter of architecture. Rabirius erected his palace, of which there are still some remains, on the Palatine hill, an edifice of wonderful construction: it is censurable in some points, which, however, are not attributed to the architect, but to the caprice of the emperor. The design and opinions upon this magnificent palace may be seen in the works of Bianchini. Rabirius also erected temples, triumphal arches, and finished or built many other public works on the Campidoglio, and in other parts of Rome. Domitian banked up the

* Martial, lib. vii. epig. 55.

† Among the edifices finished by this emperor, some reckon the enriched and highly beautiful triumphal arch of Titus, constructed of large masses of Paros marble. It had originally four columns on each of its two fronts, is the first instance in the use of the composite order, and consists of but one opening or thoroughfare, 17 feet 6 inches wide.

river Vulturno, to prevent the injury caused by its frequent inundations, and from Pozzuolo to Sinvessa made a way called Via Domitiana, 40 miles long. With such solidity did the Romans construct their public ways, that they seemed made for eternity. To accomplish this, it was first necessary, at a prodigious expense, to make the marshy ground firm, and with several strata of stones form a mass of extraordinary depth and width: on this mass, instead of the usual pavement, were placed large stones cut into regular forms, and fixed with great nicety over the whole superficies of the road. That which Domitian formed, met the bridge built by him over the Vulturno, and was terminated by a triumphal arch, also erected by him, at the point where the road united with the Via Appia. The bridge and arch were of white marble very richly ornamented. Rabirius is believed to have been the architect of all these great works. Domitian,* who wished that all he touched might become gold, adopted most barbarous and sanguinary means to obtain it: after his death, the Roman people destroyed his palace, his triumphal arches, and every monument of his pride. They spared those edifices which were of public utility, but destroyed a great part of their ornaments, that no memorial should remain of a sovereign who was regarded with detestation by the whole world.

JULIUS FRONTINUS,

(A. D. 100.)

THOUGH not a professor, certainly evinced great knowledge of architecture. Among other works, he composed

* Plutarch, Vit. Pub.

a book on the Roman aqueducts, of which he had the superintendance, under the emperor Nerva. In this work, besides the names and titles of the persons who had the principal care of the aqueducts, beginning from Agrippa to Frontinus, there are many useful observations on various sorts of public edifices.

C. PLINIUS SECUNDUS,

THE nephew and adopted son of Pliny the naturalist, although not an architect by profession, was very learned, and built many edifices, which he has described with great ability.* When consul in Bithynia, he had the particular care of all those buildings connected with public convenience; he built the baths in the city of Nicomedia; he rebuilt many public and private edifices in various parts of Asia Minor, which had been damaged by fire: at Nicæa he erected a magnificent theatre, and cut a canal of communication from the lake Nicæa to the sea. He shewed so much diligence and knowledge in building, that the virtuous emperor Trajan gave him the general superintendance of the aqueducts and the other employments which Frontinus had exercised; but what does most honour to Pliny is, the excellent use he made of his riches, and which every opulent man should imitate: besides his pleasure houses,—of which he has left elegant descriptions, one called Laurentine, † between Laurentium and Ostia, on the Tyrrhenian sea, and the other, the Tuscan ‡ house near Borgo St. Sepulchro, both described

* Les Plans et les Descrip. des Maisons de Plinie le Consul, par M. Felibien.

† Pliny, lib. ii. epist. 17.

‡ Ibid. lib. v. epist. 6.

by Scamozzi and Felibien,—he erected at Como, his native place, a library, and endowed it with considerable funds for the maintainance of a professor and poor scholars: not only Como, but Milan and other countries were benefited by Pliny with useful and beautiful buildings. He was certainly not rich; but he found many means to confer great benefits at a small expense.

MUSTIUS

ERECTED a temple to Ceres, by order of, and at the expense of the above-mentioned Pliny,* which was embellished with statues, columns, and other ornaments of marble.

APOLLODORUS

WAS born at Damascus,† and by his rare talents acquired the favour of Trajan, the most exemplary of sovereigns. The works that remain of this architect are considered unequalled: he built the great square of Trajan,‡ to form

* Pliny, lib. ix. epist. 39. † De Ædific. Justinian. lib. iv. cap. 6.

‡ A very extensive and interesting excavation has been made within these few years, which has enabled us to judge, in some degree, of the magnificent buildings that once surrounded the column of Trajan: the marble pavements are 15 feet below the modern streets of Rome. The column is nearly perfect; its pedestal consists of seven blocks of white marble, the cornice of which is in one piece, 20 feet square and 6 feet 4 inches and a half deep. The column is composed of

which, he had to level a hill 144 feet high : in the centre was raised a column, which was to serve not only as a memorial of the victories, but as a tomb to this virtuous emperor ; and its height expressed that of the hill which had been removed, as is seen by an inscription on the pedestal. At the top of the column was a statue of Trajan, with a golden globe in his right hand : some say, that within this globe his ashes were deposited ; others, that he was buried under the column. Among the superb edifices which surrounded the square, was a triumphal arch erected by the Roman people in memory of his heroic actions : neither Rome nor the world could boast of so beautiful an assemblage of buildings. It is to be regretted that little remains of its original magnificence. Apollodorus built a college, a theatre appropriated to music, the basilica Ulpia, a celebrated library resembling that so much enriched by Domitian on the Palatine, the baths of Trajan, temples, roads, aqueducts, and other considerable edifices in Rome, in Italy, and in the provinces of the Roman empire. The Circus Maximus, which was re-established, enlarged, and ornamented by Trajan, is also believed to have been under the direction of

nineteen, each the whole diameter, and about 5 feet in height : in the centre are cut out stairs to ascend to the top. The capital, or last of the nineteen blocks, is 14 feet square, the eggs beautifully sculptured, the order Doric, and the flutings visible at the necking ; the shaft is covered with sculpture proceeding spirally in twenty-two revolutions to the top, representing the exploits of Trajan : the statue of the emperor has been removed, and that of St. Peter substituted in its place.

The height of the pedestal is 17 feet 11 inches, that of the shaft, capital, and base, 97 feet 9 inches, and the ancient part of the pedestal remaining above, 9 feet 6 inches, making a total of 125 feet 1 inch. The height was further increased by the statue and its plinth. The lower diameter is 12 feet 2 inches, the upper 10 feet 9 inches. There are in all 182 steps to the summit. The arch of Constantine contains some of the bas-reliefs and ornaments that formed decorations to Trajan's buildings.

Apollodorus, who was concerned in almost all the noble edifices erected under that emperor; but the most noted work was the bridge* over the Danube, in Lower Hungaria, near Zeverino, where the river is narrowest and most rapid. On account of its great depth, it was necessary to make a foundation, by throwing into the bed of the river a prodigious quantity of various materials, and thus form a mass up to the edge of the water, on which was constructed the piers and the rest of the bridge: there were twenty piers, some parts of which still remain, and twenty-two arches; each pier 60 feet wide and 150 feet high, distant from each other 160 feet: the height of the bridge was 300 feet, and the length 800 perches; that is, a mile and a half; the extremities were defended by two fortresses. The whole was of stone. Europe cannot produce any thing so grand and bold: the inscription ran thus:—"Quid non domat? Sub jugum ecce trahitur et Danubius." But this bridge is nothing to be compared to those in China, where, amongst many others, is that between Focheu and the suburbs of Nanti, which has 100 arches, and so lofty that vessels can pass under them in full sail. The whole is composed of large blocks of white marble, with balustrades, the pedestals of which are ornamented on each side with marble lions. Still more wonderful is the bridge of Loyang, over the sea, in the province of Fokien. It is formed by 300 immense piers, not united by arches, but by blocks of black marble, each eighteen paces long, two high, and as many wide; the balustrades are also ornamented with lions. In China there are many bridges from one mountain to another. Near Kingtung is one of wood, attached to twenty chains of iron, which unites the extremities of two mountains. There is also another of stone, almost four miles long; called the flying bridge, being 400 cubits high, resting on

* Dion. Vit. Trajan.

two mountains, and crossing a valley of frightful depth. The boldness of the Chinese in these and other works of public utility, is superior to all that has been done in any age whatever: they can employ 100,000 men to level a mountain, not from caprice, but for the convenience of commerce.* But let us return to our bridge over the Danube, which has almost disappeared. Trajan constructed it to facilitate the passage of his troops, when he led them against the barbarians. His successor, Adrian, fearing they might use it against the Romans, dismantled it.

Apollodorus † terminated his life unhappily. Instead of cultivating the friendship of Adrian, presumptive heir to the throne, he was imprudent enough to deride him for wishing to shew his knowledge of architecture. When Adrian became emperor he built a temple, dedicated to Venus and Rome, from his own designs, which, when finished, he sent to Apollodorus, to shew him that it was in his power to execute a building without his assistance. Apollodorus, who was not formed for a courtier, contented himself with answering, that if the deities, whose statues were in a sitting posture in the temple, should be inclined to stand up, they would run great risk of injuring their heads against the roof. Adrian discovered the irreparable error; and, as brutality generally succeeds injustice, he abused the sovereign power, and caused Apollodorus to be murdered.

C. JULIUS LACER

FLOURISHED in the time of Trajan; in honour of whom he built a small but elegant temple in the province of

* Barrow's and Earl Macartney's Travels.

† Ælius Spartian. Vit. Hadrian.

Alcantara in Spain, which still exists, under the name of San Giuliano. He also constructed a bridge* over the Tagus, considered the most celebrated in all Spain. It was of stone, 200 feet from the water and 670 feet long, with six arches, each 84 feet span, the piers 28 feet wide; on the bridge was a triumphal arch; and both were by the province dedicated to Trajan. The latter was executed in courses of granite, 4 feet long and 2 high.

At the entrance of the bridge is a small temple, of the same materials, 23 feet high and 14 wide, covered with large flat stones, so well united that, notwithstanding its antiquity, there is not the slightest appearance of its having ever admitted water. The façade is composed of three stones only, supported by two columns; and on one jamb is the celebrated inscription, from which it may be supposed that Lacer was not professionally an architect, but performed the noble office of dedicator. To this great work, which is worthy of being preserved, the whole neighbouring country contributed. Charles the Fifth had the arch rebuilt on a smaller scale, it having been injured by the Moors when they lost Alcantara, an Arabian word signifying bridge. The Portuguese also injured it in the war at the commencement of the present century, but it was restored by Charles the Third.

The bridge of Merida very much resembles the one described, but was built by Augustus, who, after the Cantabrian war, founded the colony called Augusta Emerita, and executed many other great works. The great bridge of Merida, over the Guadiana, is 2575 feet long, 26 broad, and 33 high, with sixty-four circular arches, not all of the same size, formed of large stones, well put together, and producing an appearance of great solidity.

There still exist the ruins of immense aqueducts, of

* Tristan. de S. Amand. Comment. sur la Vie de Trajan. Grut. p. 162, Inscript. 1, 2, 3, &c. Bergier, Histoire des Grands Chemins de l'Empire.

three orders of arches, naumachiæ, theatres, baths, triumphal arches, temples, statues, circuses, &c. built by the Romans. But still more imposing are the walls of the destroyed city, which struck Philip the Second with mute astonishment. It is asserted that these walls extended six leagues, that there were 3,700 towers, that the streets were 30 cubits wide, that the city had 80,000 infantry, 10,000 cavalry. Probably, an excavation made among these ruins would afford equal interest with those of Herculaneum or Pompeii, although the destruction of the latter was by more awful circumstances.

DETRIANUS,

MORE a courtier than Apollodorus, cultivated the good opinion of Hadrian,* who confided to his management the greatest works that were done in Rome. This architect restored the Pantheon,† the Basilica of Neptune,

* Ælius Spartian. Vit. Hadriani.

† Built by Agrippa, and still remains at Rome, but has undergone frequent alterations in the interior. The simplicity and elegance of the arrangement of its portico cannot be sufficiently commended; the only fault ever attributed to it is the height of its pediment, the tympanum of which was once filled with a bronze bas-relief. It is in front octastyle, and consists in the whole of sixteen columns, the shafts each of a single block of granite. The bases and capitals Corinthian, and of white marble, as well as the entablature and pediment. This portico, measured on the face of the columns, is in extent 110 feet, projects from the face of the antæ 44 feet 6 inches, and has three columns on each return. The second, fourth, fifth, and seventh columns, are omitted in the two files behind the octastyle front, thus leaving a very spacious pavement.

The columns are 5 feet diameter, 46 feet 5 inches high, including capital and base, and the entablature measured on the return 11 feet in height. The interior is circular on the plan, 142 feet 6 inches diameter

the Forum of Augustus, the Baths of Agrippina, and many other edifices that had been burnt or destroyed. He also erected a magnificent temple dedicated to Trajan; but his most conspicuous work was that vast structure the sepulchre of Hadrian, and the bridge Ælius, now that of St. Angelo. It was ornamented with a high covering of brass, supported by 42 columns, terminated at the top by as many statues.

Detrianus performed the miracle of removing the Temple of the goddess Bona from one place to another. It is to be regretted that we do not know how this was accomplished; we must suppose the temple was not of brick or small stone, but composed of large masses, united together without cement. The temple was taken to pieces, and the stones dexterously removed, and again put together as at first: thus may the miracle be explained: but we cannot comprehend how Detrianus transported to the same situation the colossus of Nero, which was of bronze, 120 feet high; he employed twenty-four elephants, and removed it in an erect posture. No sovereign erected so many buildings as Hadrian, but we may say with Apollodorus, that he had not a pure taste for architecture, though under him it certainly became more refined. He was continually journeying through the provinces, and erecting edifices; whence, his name being so often inscribed on the walls, he was called *Urba Paretaria*.

Among many sumptuous edifices in Gaul, he erected the Basilica Plotina at Nismes, the most superb building in that country. He then went to England, to defend that portion of the Roman empire from the incursions of the warlike Caledonians, and erected a wall from the Eden in Cumber-

between the pilasters, which with the columns are Corinthian, and have an entablature with an attic above, and together serve to decorate the walls to a height of 72 feet 3 inches. On the attic is placed an hemispherical dome, making a total height of 148 feet 5 inches from the pavement. The external wall is 23 feet in thickness, and constructed with brick.

land to the Tyne in Northumberland, a distance of eighty miles. This is not to be compared to that built by the Chinese 137 years before Christ, to separate and defend China from the Tartars, which still remains, and extends 500 leagues. It is raised over mountains, and crosses precipices, being almost 20 feet broad in every part, and 30 feet high, with wide openings for the course of the rivers, and a number of towers. The whole was finished in five years; a monument superior to the pyramids of Egypt, both in its utility and its immensity. In almost every province of the empire Hadrian founded new cities, rebuilt those which had been destroyed, and repaired the more ancient; he rebuilt Jerusalem, to which he gave the name of his family, calling it *Ælia Capitolina*. He erected a theatre and various temples, employing the stones of the sanctuary of the Hebrews; and where their Temple stood he placed statues of the gods. Over the gate which led to Bethléhem, was placed a marble hog. But where Hadrian most displayed his taste for architecture was in Greece, particularly at Athens,* a city more admired by him than any other. He finished and embellished the famous Temple of Jupiter Olympius,† which had been

* According to Pausanias, Greece was full of the edifices, bridges, aqueducts, &c. of Hadrian; and in lib. i. cap. 5, he states, that “such temples of the gods as he either raised or adorned, what other gifts he freely bestowed on the Grecian cities, and has granted to the solicitations of the barbarians; all these are committed to writing at Athens, in the common temple of the gods.”

† Sixteen gigantic columns, of the Corinthian order, are all that remains of this temple, which formerly boasted of 120, so disposed as to present a triple row of ten in each front, and a double row of twenty on the flanks. The length, measured upon the upper step, was 354 feet, its breadth 171 feet. The columns were 6 feet 6 inches diameter, and more than 60 feet high. The entire building was constructed with marble from the quarries of Pentilicus. It has been thought that the outer peristyle was constructed by Hadrian, as the bases of these columns are placed on plinths, a practice which the Greeks seldom or never adopted.

begun six centuries before. He erected a pantheon, with a dipteral portico, decastyle, of Corinthian columns, a triple porch, and double on the flanks. Within the rectangular cell were two orders of columns over each other, and a vast enclosure without; also a great library, and other stupendous works, of which there are many remains.* Finally, he retired to Tivoli, and built the magnificent villa which is still the admiration of travellers. In the erecting of so many edifices in the three quarters of the world, the architect Detrianus could not alone have been employed; the names of the others are not handed down to us.

ANTONINUS

WAS a senator of Rome, well versed in architecture,† and built several edifices in Epidaurus, an ancient city of Peloponnesus; the most considerable of which was a temple dedicated to all the gods, and others consecrated

* Pausanias, lib. i. cap. 18, says, that Hadrian raised for the Athenians the Temple of Juno, that of Jupiter Panhellenius, and a temple, or sacred enclosure, common to all the gods. The most remarkable things are 120 columns of Phrygian marble. The walls are constructed after the manner of the porticoes. The cellæ there have a roof of alabaster gilt, and are every where ornamented with statues or paintings. There is also a library and a gymnasium, which is surnamed Hadrian, and which contains 100 pillars of Libyan stone. And, lib. viii. cap. 10, the Temple of Equestrian Neptune, near the Mantinean walls, was built by Hadrian, who placed spies over the workmen to prevent any one from looking into the ancient temple, or taking away any of the ruins. He ordered the workmen to build the new temple entirely round the old one, which was erected by Trophonius and Agamedes. And, lib. x. cap. 35, Hadrian dedicated at Abæ a temple to Apollo. The emperor also built a portico here, which was called after him.

† Ibid. lib. ii. cap. 27.

to Apollo, Æsculapius, and Health. He also built the Baths of Æsculapius, and restored a portico called Coryos, constructed at first of unburnt bricks.

HIPPIAS

WAS, according to Lucan,* much esteemed for his peculiar ability in the construction of baths and other edifices destined to pleasure or health. This architect not only chose their situations advantageously, but had a wonderful knowledge in the distribution of the rooms, placing them conformable to their use, and decorating them within and without in a manner which united pleasure, convenience, and health.

NICON,

(Died A. D. 161.)

THE father of the celebrated physician Galen, was a mathematician and architect; but as he never removed from Pergamus, his country, where he taught the Greek language, he had no opportunity of practising his talent in any thing of consequence. Instead of devoting his time to architecture, he exercised his patience, and the mildness of his temper, in enduring the violence of his wife, who, says Galen, her son, was even more furious than Xantippe, the wife of Soerates; it is said that she has

* Lucan. Dialog. Hipp.

sometimes bitten her attendants. Galen also knew something of architecture, on which he has left some excellent rules. He was descended from a race of architects; his father, his grandfather, and great-grandfather, were all of that profession.

Towards the close of the second century lived Ælian, Lucan, Pausanias, Athenæus the Deipnosophist, Julius, Pollux, and many others, who have left us superficial descriptions of several edifices. Under the wise emperors Antoninus and M. Aurelius, many grand works were executed at Rome: the Temple of Antoninus and Faustina;* the column of Antoninus,† much esteemed, but not equal in excellence to that of Trajan; roads, aqueducts, temples, theatres, amphitheatres, and palaces, in various parts of the empire. Laodicea, Smyrna, and other cities of Asia Minor, which had been destroyed by a most dreadful earthquake, were rebuilt.

* The portico consists of ten columns, six of which form the front of the temple; the shafts are of cippolino marble, each in one piece; the rest is of white marble: part of the cell remains, built of peperino stone, once covered with slabs of marble. The extent of the portico, measured on the face of the columns, is 67 feet, and on the return to the face of the pilasters 36 feet 10 inches; the diameter of the columns is 4 feet 10 inches; their height, including base and capital, 46 feet 8 inches; that of the entablature, measured on the flank, 10 feet 9 inches. It is of the Corinthian order, and is the only Roman specimen remaining in which the cornice is executed without dentils or modillions; the frieze on the flank is highly decorated with sculpture; that of the front contains an inscription.

† This column was erected by the emperor Marcus Aurelius, and dedicated to Antoninus Pius; originally it graced a forum, the buildings of which do not remain: the sculpture is in high relief. The height of the present pedestal is 26 feet; the column, with its capital and base, consisting of nineteen blocks of white marble, is in height 97 feet 3 inches; the pedestal above 6 feet, on which is a bronze statue of St. Paul, that of the emperor being removed. The lower diameter is 13 feet 2 inches, and the whole, with its winding staircase, is constructed in a similar manner to that of Trajan, but its proportions are not so elegant.

Under Septimius Severus was erected the Septizonium and the grand triumphal arch, which still exists. Alexander Severus was a great lover of architecture; not content with employing the most able professors, he wished the science taught publicly to the youth destined for the pursuit. In times so happy for the art, it is astonishing that the name of a single architect should not have reached us.

After the good emperor Alexander Severus, that is, about the middle of the third century, we may fix the decline of architecture, and from that period it gradually became worse, till it sunk into the lowest state of barbarism. Not even the beautiful code left by Vitruvius, nor the number of noble edifices, which were speaking books, could stop the progress of this corruption. The contrary should have happened; that is, architecture should have been stripped of its defects and brought to perfection. But all art and science, from various causes, began at that time to decline, and, by its strict connexion with them, architecture shared their fate. All the edifices erected afterwards had no other recommendation than that of solidity, as is seen in the arch of Galienus, contiguous to St. Vitus, near St. Maria Maggiore, and in the basilica of St. Peter's, erected by Constantine. The baths of Dioclesian were so surcharged with ornament, that at the spectacles given by that emperor, the spectators were almost overwhelmed with the carving that projected out from the edifice. His palace of Spalatro, at Salona in Illyria, each side being 705 feet, had four vestibules, each 35 feet wide, and the principal one 246 feet to the court-yard, the transverse one 480 feet, the whole having arches.

OF THE
ANCIENT ARCHITECTS.

BOOK II.

OF THE ARCHITECTS OF THE MIDDLE AGES, viz. FROM
THE FOURTH TO THE FIFTEENTH CENTURY.

CHAP. I.

FROM CONSTANTINE TO CHARLEMAGNE.

THE emperor Constantine despoiled the whole empire of statues, pictures, bas-reliefs, marbles, and bronzes, in order to decorate Constantinople, and make it a second Rome; but the architecture of his new city was as inferior to that of Rome as its situation was superior to that on the dark and troubled Tiber.

METRODORUS,

A native of Persia,* who in India erected fortifications, baths, and other edifices, introducing into that country a branch of science till then unknown; for which the Indians and their king rewarded him with jewels of immense value. Returning into Persia, and seeing the Christians persecuted, he went to Constantinople, where,

* Cedrenus, Hist. Compend.

by his riches, he obtained the friendship of the emperor Constantine, and induced him, it is said, to carry a war into Persia in favour of Christianity. It is not known whether this architect erected any buildings in Constantinople.

ALYPIUS,

(A.D. 363,)

A learned architect of Antioch, who held many important offices under the emperor Julian. It is said* that he was commanded by that emperor, A.D. 363, to rebuild the Temple of Jerusalem, and that when the workmen were employed in excavating for the foundations, fire issued from the earth and destroyed them; an indication of the Divine wrath against the reprobate Hebrews and the apostate Julian. The story is affirmed by many respectable and classic authors, but we are not bound to credit it.

CYRIADES

WAS honoured with the consular dignity, and, from his knowledge in architecture and mechanics, was employed by the emperor Theodosius in the construction of a new basilica and a bridge, the situation of which is not known. In the building of the latter he evinced a disposition to

* Amm. Marcell. lib. xxxiii.

avarice, which should never belong to an architect; he was accused of not forwarding the work, and of not giving it the proper solidity: the direction of the buildings was therefore given to his accuser Auxentius, also a senator; but Cyriades raised so powerful a party against him, that he was obliged to abandon the work. Symmachus, the prefect, well versed in architecture, was then ordered by the emperor to inquire into the affair. He began by reviewing the accounts of Cyriades; and that the building of the bridge might not be interrupted, he gave the care of it to Afrodisius, consul and tribune, and well deserving the confidence reposed in him. We do not know the issue of this inquiry, but the letters of Symmachus* lead to a conjecture that Cyriades could not expect a favourable sentence from so skilful and upright a judge.

SENNAMAR.

THIS Arabian architect flourished in the fifth century. He built two palaces, or castles, one called Sedir, the other Khaovarnack, which the Arabs have placed among the wonders of the world; and with reason, if the singularities recounted of them are not fabulous; one single stone, how arranged it is difficult to imagine, unites the whole structure of each of these edifices, so that if the stone were removed they would fall into ruin. To this wonderful fact is added another, viz. that the colours of the stones of the walls vary several times a day. The king Noman Alaouvar, tenth king of the Arabs, recompensed this wonderful architect with rich gifts; but,

* Lib. iv. epist. 71; lib. v. epist. 74; lib. x. epist. 38 and 39.

becoming afterwards fearful that he might build similar edifices elsewhere, or make known the situation of the important stone, which was the key to the whole mass, or whether the architect boasted he could have performed greater wonders, had he been secure of receiving such a recompense, certain it is that the monarch, from one of these causes, had him precipitated into a ditch.

ENTINOPUS OF CANDIA

WAS the first who contributed to the foundation of Venice.* We find in the archives of Padua, that when Rhadagasus entered Italy, and the cruelties exercised by the Visigoths obliged the people to take refuge in various places, an architect of Candia, named Entinopus, was the first to retire to the fens of the Adriatic, where he built a house, which remained the only one for some years. At length, when Alaric continued to desolate that country, others sought an asylum in the same marshes, and built twenty-four houses, which may be called the germ of Venice. Historians inform us that the house of Entinopus being afterwards attacked by fire, A.D. 420, which communicating to the others, destroyed all except that of the architect, which was miraculously saved by a shower of rain falling at his prayer, he made a vow to convert his house into a church, and dedicated it to St. James: the magistrates, who were among the new inhabitants, contributed to the building and ornamenting of it. This still exists in the quarter of the Rialto, which is universally considered as the most ancient part of Venice.

* Venetia del Sansovin e Martinoni, p. 196.

We are now arrived at the period when the Visigoths, Vandals, Huns, Suevi, and other barbarous nations, burst forth in swarms from Scythia, devastating the empire of the West, and under whom the arts and sciences, which had been declining for some centuries previous, became totally degenerated.

ALOÏSIUS

WAS commissioned by Theodoric,* prince of the Ostrogoths and king of Italy, to restore several edifices in Rome and the surrounding countries, particularly the baths and aqueducts, which, from time, neglect, and warfare, were mostly injured. Theodoric was desirous of preserving the principal edifices, and commanded that the materials of those which could not be restored should be used to ornament the new buildings which he was about to erect. The sumptuous Basilica of Ravenna, called the Basilica of Hercules, was embellished with ancient fragments of marble collected from various parts. It was in Ravenna that this king employed Daniel, of whom Cassiodorus speaks with so much esteem, praising him for his ability in arranging the different antique pieces of marble. The prodigious rotunda, the cupola of which was of one piece, 38 feet in diameter and 15 in thickness, and weighing more than 100,000lbs., was the work of this period, viz. 495. It was surrounded by colossal statues of the apostles, which were carried away by the French under Louis XII. It is much disputed by what means such an immense mass was raised so high. This edifice was one of the most

* Cassiod. Varior. lib. xi. epist. 29.

extraordinary of antiquity, and said to have served as the sepulchral monument to some king.

Amasis, king of Egypt, removed from Elephanta to Sais an edifice formed of one block, 52 feet long, 35 broad, and 20 in thickness.

For the better understanding the genius of Theodoric and the Goths in architecture, it will not be useless if we lay before our readers some passages of Cassiodorus, and particularly a letter of his, in the name of Theodoric, to the above-mentioned Aloisius:*—

“ It is glorious to preserve the wonderful works of antiquity, and it is our duty to restore the most useful and beautiful. I, says Theodoric, cannot forget the fountain Abano, which, in the form of a vessel filled with cerulean water, I have seen boil from the bottom as amid burning furnaces; and, notwithstanding the clouds of hot vapour, exhibit a wonderful clearness. The waters overflow the mouth, with a noise like wheels, swell on the lip, fall, and, flowing through tranquil and freezing canals, after many turnings, become boiling. O wonderful artifice! the fires of nature are tempered by art, and that which was originally destructive to man, is, by his ingenuity, rendered wholesome and delightful. With reason do philosophers say that the elements are connected by reciprocal bonds, and that contrary things unite with wonderful confederation. Thus the water, which is precipitated from the rocks in boiling vapours, unites when entering the ornamental edifices of the baths, imparts its heat to the air, and being received into the reservoirs, becomes tractable, and is a useful and agreeable medicine for all sorts of maladies. *Quæ ideo Aponum græca lingua beneficalis nominavit antiquitas.* It is wonderful that the same water, which on its first issuing from the rock is noxious, should, on descending

* Cassiodorus, lib. ii. Varior. epist. xxxix.

to a more temperate soil, and being received into the fish-ponds of Nero, become as cold as it was hot at first. It is most probable, and in correspondence with the character of its author, that this fish-pond was ornamented with stones similar to green gems, in order that the water might, by reflection, appear in motion. But it is more extraordinary still, that, in this same bath, if a woman enters, the waters consume her. Thou, Aloisius, must direct thy attention to the renewal of these edifices, the baths, the conduits, clearing away all the bushes and brambles that have overgrown and insinuated themselves into the very heart of the buildings, and insensibly burst them asunder. *More vipereo, prolem sibi fecunditate contraria nutrant, unde se compago casura dirumpat.* It is also necessary that you rebuild the destroyed palace, and divest of its now rude aspect the space between the public building and the fountain. Every thing should have a smiling appearance with the Antenor land of wonders; among which the most remarkable is, that whoever steals beasts cannot deprive them of their wool, unless they are first dipped in the scalding waters of these mountains. *Loquitur illic tacita natura dum judicat et sententiam quodammodo dicit, quæ perfidiam negantis excludit.* Expend what is necessary, and if the money which I have sent is not sufficient, send me an account of what is wanting and I will supply you. *Quia non gravamur expendere ut tanta videamur ruris amœna custodire."*

The fabulous property of this water against thieves and women, takes nothing from the merit of the above letter. Respecting fountains, Cassiodorus appears rather weak in his judgment. He makes king Atalaric say, that the Fountain of Arethusa in the territory of Scillatinus, is the most tranquil of all waters, but as soon as any one speaks, it is disturbed; and if the voice be raised, it foams furiously. But fables belong to all times. Tiberius thought the Fountain of Abano, and his Temple

of Gerione,* miraculous. Sovereigns are not always careful of the public splendour; in this Theodoric shone amongst the most distinguished. His formula to the prefect of Rome on the architecture of the public edifices, is a curious document.†

“ The beauty of the Roman buildings requires a skilful overseer, in order that such a wonderful forest of edifices should be preserved with constant care, and the new ones properly constructed, both internally and externally. Therefore we direct our generosity not only to the preservation of ancient things, but to the investing the new ones with the glories of antiquity. Be it known, therefore, to your illustrious person, that for this end an architect of the Roman walls is appointed. And because the study of the arts requires assistance, we desire that he may have every reasonable accommodation that his predecessors have enjoyed. He will certainly see things superior to what he has read of, and more beautiful than he could ever have imagined. The statues still feel their renowned authors, and appear to live: he will observe expressed in the bronze, the veins, the muscles swoln by exertion, the nerves gradually stretched, and the figure expressing those feelings which act on a living subject. It is said that the first artists in Italy were the Etruscans, and thus posterity has given to them, as well as to Rome, almost the power of creating man. How wonderful are the horses, so full of spirit, with their fiery nostrils, their sparkling eyes, their easy and graceful limbs! they would move if not of metal. And what shall we say of those lofty, slender, and finely fluted columns, which appear a part of the sublime structure they support? That appears wax, which is hard and elegant metal; the joints in the marble being like natural veins. The beauty of art is to deceive the eye. Ancient historians acquaint

* Sueton. lib. xiv. in Tiber.

† Cassiod. lib. vii. Varior. Form.

us with only seven wonders in the world: the Temple of Diana at Ephesus; the magnificent sepulchre of the king Mausolus, from whence is derived the word *mausoleum*; the bronze colossus of the sun in Rhodes; the statue of Jupiter Olympus, of gold and ivory, formed by the masterly hand of Phidias, the first of architects; the palace of Cyrus, king of Media, built by Memnon of stones united by gold; the walls of Babylon, constructed by Semiramis of brick, pitch, and iron; the pyramids of Egypt, the shadows of which do not extend beyond the space of their construction. But who can any longer consider these as wonders, after having seen so many in Rome? Those were famous because they preceded us; it is natural that the new productions of the then barbarous ages should be renowned. It may truly be said that all Rome is wonderful. We have, therefore, selected a man clever in the arts, who, in seeing so many ingenious things of antiquity, instead of remaining merely enchanted with them, has set himself to investigate the reason, study their books, and instruct himself, that he may become as learned as those in the place of whom he is to consider himself appointed."

Can these Goths be the inventors of that architecture vulgarly called Gothic? and are these the barbarians said to be the destroyers of the beautiful monuments of antiquity? Ecclesiastical history gives to the good Christians and the jealous ecclesiastics the honour of having dismantled temples and disfigured statues, in Italy, Greece, Asia, and Egypt.

Boëtius and Symmachus, the first literary men of that age, were both superintendents of architecture. Symmachus had the direction of the buildings raised or restored in Rome, and principally of the Theatre of Pompey, which Theodoric had rebuilt. Thus the king wrote, according to Cassiodorus:—"You have constructed fine edifices; you have moreover disposed of them with so much wisdom

that they equal those of antiquity, and serve as examples to the moderns; and all that you shew us is a perfect image of the excellence of your mind, because it is not possible to build correctly without good sense and a well-cultivated understanding." Is this the language of a Gothic barbarian, the destroyer of good taste? Pericles, Alexander, Adrian, one of the Medici, could not have reasoned better. But who could have imagined, after these fine expressions, that a Symmachus would have been decapitated by Theodoric? Boëtius suffered the same disgrace. However, the most virtuous persons are subject to commit serious faults, as the most depraved sometimes perform illustrious actions.

The greatest man of the time, Cassiodorus, secretary of state to Theodoric, was well acquainted with architecture. He designed every sort of edifice, drew them, and coloured them with equal facility. It is thought that he acted as architect to divers considerable buildings, among which, to the monastery erected at his expense near Squillace, his country, where he retired to pass the last years of his life in tranquillity, giving a fine example to disgraced ministers of state, who are generally wanting in philosophy. The works of Cassiodorus abound with excellent precepts in architecture. It was by his advice that the prudent queen Amatasunta, daughter of Theodoric, patronised science and the fine arts, with which she was desirous that her consort Atalaricus should be acquainted. It is clear, that the Goths were not the authors of that architecture called Gothic. The Goths, and barbarians who overran Italy, had not any characteristic architecture, good or bad. They brought with them neither architects, painters, nor poets; they were all soldiers; and when fixed in Italy employed Italian artists: but as in that country good taste was much on the decline, it now became more debased, notwithstanding the efforts made by the Goths to revive it.

LEON,

BISHOP of Tours* in the sixth century, was an architect, and erected many edifices. In these days of darkness the seculars devoted themselves to arms. The ecclesiastics were the only persons who could read and write, and many monks, abbots, priests, and bishops, practised architecture and the useful trades.

ST. GERMAIN,

BISHOP of Paris,† gave the design of the church which king Childebert erected in honour of St. Vincent. It is now called St. Germain, from the name of this holy bishop. The same king sent the prelate to Angers, to build a church in honour of another St. Germain, bishop of Auxerre; and after finishing this building he erected a monastery at Mans, and others in various places.

St. Avitus, bishop of Clermont, built the church of Notre Dame du Port, and repaired that of St. Anatolien. Fereol, bishop of Limoges, also acted as architect in the restoration of many churches in his diocese.

* Felibien, Vie des Architectes, p. 146.

† Greg. de Tours, lib. iii. cap. 29.

DALMATIUS,

BISHOP of Rhodes, wishing to become an architect, undertook to rebuild his cathedral; but not succeeding to his wish, he took it down, rebuilt, and demolished it so many times, that he died without finishing it.

St. Agricola, bishop of Chalons, was the architect of the church in his diocese, and particularly of his cathedral, ornamented with columns, and enriched with marbles and mosaics.

St. Gregory of Tours also made designs for many churches. These three holy bishops lived in the sixth century.

ÆTHERIUS

FILLED one of the first posts in the council of the emperor Anastasius, and was by that sovereign esteemed a most clever architect, for having built in the great palace of Constantinople an edifice called Calci, which was a great saloon.* It is thought that Ætherius built that strong wall which extended from the sea to Selimbria, an ancient city of Thrace, to defend Constantinople from the incursions of the Bulgarians and Scythians. To such weakness was the empire of the East reduced.

* Felibien, Vie des Architectes, p. 148.

ANTHEMIUS

WAS born at Tralles,* a city of Lydia, in Asia Minor, and, with Isidorus of Miletus, built, by order of the emperor Justinian, the famous Temple of St. Sophia, at Constantinople, which had been first erected by Constantine, but, the roof being of wood, was several times burnt, and as frequently rebuilt by other emperors, and by Theodosius. Justinian was desirous of making it one of the most superb edifices; and on seeing it finished, transported with joy, he exclaimed, "I have surpassed thee, O Solomon!" The situation of the temple is the most advantageous in Constantinople, being on a small hill which overlooks the sea, near to the Seraglio.

The plan of this church is almost square; it is 252 feet long, 228 wide, and stands east and west.

In the centre it has a great hemispherical cupola, 108 feet in diameter, with twenty-four windows in the circumference. This cupola is supported by four large piers of travertine, 48 feet thick, on account of the frequent earthquakes. On these piers are raised four grand arches of one order, 142 feet from the pavement. On the arches is placed a high entablature, surmounted by a balustrade, serving as a drum to the vault of the cupola, which has, above, an aperture covered with a small but lofty lantern. From the centre of the cupola to the pavement is 80 feet. Between the piers is a colonnade of forty columns, 4 feet in diameter, but their height is not known. On the capitals of these columns are arches, and above them sixty other smaller columns, with arches over them. These formed two galleries for the women, who at that time

* Procope, lib. i. cap. 1. de Ædific. Justin.

were always separated from the men. The columns were all of the rarest marble, some of porphyry, others of serpentine and statuary. The shaft is almost without diminution; the base and the capitals are singular, not bearing any resemblance to Grecian architecture. So much had good taste degenerated in the very vicinity of its birth, and where it had made the greatest progress.

The great cupola is flanked by two smaller ones, also hemispherical.

At the eastern extremity is a semicupola, under which was erected the only altar that the temple contained, where now the Koran is kept. The whole of the roof is of stone, the cupola ornamented with mosaics, and the walls with paintings. It is wonderful that the Turks should have left so many images of Christ and his saints, having only destroyed the cross. The pavement is of fine marbles, of various colours, among which the most brilliant is the rose. Without was formerly a vestibule, or square piazza, surrounded by porticoes, which are, however, not remaining. From the vestibule you proceed to another portico, the length of the church, not supported by columns but pilasters, and over this another. Nine magnificent bronze doors, the jambs of marble, lead from the portico into the church; the middle one being the largest. Alabaster, serpentine, porphyry, mother-of-pearl, and carnelion, are not spared, either within or without. In the centre of the vestibule was an immense bronze equestrian statue of the emperor Justinian. On entering this temple the spectator is struck with admiration at its size and general effect; but the exterior is trifling, entirely surrounded by deceptions, and the façade is poor. For the erection of it Justinian deprived the professors of science of their salaries, imposed taxes; and to cover the cupola with lead, took up all the conduits of the fountains. The building was scarcely finished, when an earthquake entirely threw down the cupola, which was quickly

rebuilt by Justinian; and for greater lightness, it is said that it was composed of pumice-stone. Since the Turks have converted it into a mosque, they have erected, in front of the façade, a number of marble chapels, with cupolas, used as sepulchres for the young Mussulman princes; and, corresponding with the four angles of the temple, they have raised four minarets, that is, isolated lofty towers. The Turks, who do not use bells, mount to the top of these minarets at certain hours, and singing some verses with a loud voice, invite the people to prayers. St. Sophia has served as a model for the other mosques afterwards erected in Constantinople. That of Solyman is smaller, but the proportions are more beautiful. They are all highly finished, isolated, and surrounded by wide streets; an advantage which our churches sometimes want.

Anthemius, besides being an architect, was also a sculptor and an ingenious mechanic. There is a book on machines attributed to him. He invented various methods of imitating earthquakes, thunder, and lightning.

For some affront offered by the rhetorician Zeno, Anthemius, in revenge, produced an earthquake, which caused him to escape from his house in terror. It is said that he caused this effect by placing a number of kettles of water, and boiling them, between the walls separating his house from that of Zeno.

ISIDORUS OF MILETUS

WAS the associate of Anthemius* in the erection of the church of St. Sophia, and many other edifices built by Justinian, not only in Constantinople but in various parts of his dominions. This emperor having also reconquered some provinces of the Western empire, he despatched several architects to repair the dismantled edifices and erect new ones.

Vegetius says, that at this time there were more than 500 architects employed by Justinian.

Isidorus had a nephew born at Constantinople, and therefore called Isidorus Bezaninus, who, with another architect called John of Miletus, both young men, built the city of Zenobia, in Syria; and terminated this great work with such success, that they acquired a fame equal with the most celebrated artists of their time.

CHRYSES

WAS from Alexandria,† and flourished in the sixth century. He acquired a great name from the embankments which he raised in Dara, a city of Persia, to confine the river Euripos within its bed, and to prevent its flux and reflux from continuing to injure the city. Whoever delights in fable, will read with pleasure in Procopius, that

* Procop. *Ædific. Justin.* lib. ii. cap. 8.

† *Ibid.* lib. ii. cap. 3.

the invention of these dykes was revealed to Chryses in a dream, in which there appeared to him a man of extraordinary size, who drew the design, and commanded him to go and propose them to the emperor, whom by his art he had inspired with a similar dream and vision.

After the death of Justinian there arose so many revolutions, by the irruptions of the Lungobardi, and afterwards of the Arabs or Saracens, that all was confusion, the arts were neglected, and Grecian architecture became extinct. Many large and expensive buildings were erected, but none beautiful. In Pavia and Perugia the Lungobardi built several rich churches. Clotaire, king of France, erected that of St. Denis, enriched with gold, pearls, and gems, within and without covered with plates of silver. For taste in architecture, riches were substituted; like the painter, who, not knowing how to express the beauty of Helen, arrayed her in a gorgeous dress.

The Caliph Aba-Jaafar Almansor, about the middle of the eighth century, employed two millions of gold in raising from the ruins of Babylon the city of Bagdat, in which he constructed a sumptuous caliphal palace, containing a wonderful hall, called "Of the Tree," because in the centre of it was a large tree; the trunk being of massive silver, the branches of gold, and the flowers and fruit of gems. On the branches were a number of statues, representing horsemen richly habited, and at the foot of the tree many others, which moved in a similar manner with those above. Abderamen, king of the Moors, about the same time, reduced the ancient Temple of Juno, at Cadova, into a grand mosque, which now serves as a cathedral, and is still called Moschita. Its length is 600 feet, and its width 250. It has fourteen gates, ornamented with sculpture and divers works in steel. The principal arch, which is gilt, is supported by 365 columns of jasper, alabaster, and black marble. There are twenty-nine small naves in the length, and all formed

by isolated columns. Thus the number of the columns amounts to nearly a million. The greatest part are the remains of small columns, a foot and a half in diameter, and little more than six brachia in height. The Christians, to make a chapel in the centre, have removed many of them. Thus the singular effect produced by this wood of columns is much diminished.

CHAPTER II.

THE ARCHITECTS FROM THE TIME OF CHARLEMAGNE, THAT IS, FROM THE NINTH, TO THE FOURTEENTH CENTURY.

PERHAPS no sovereign ever gave so much employment to masons as Charlemagne, who, throughout the whole of his vast dominions, erected innumerable and extensive buildings of every description; but no memorials are left of the architects; and the architecture, instead of improving, greatly declined, changing from the massive and heavy, to an excess of lightness, and a redundance of ornament. The greatest project of Charlemagne was that of uniting the German, Mediterranean, and Black seas. His idea was, to make two canals: one to communicate between the Moselle and the Saone, and thus open the passage from the Mediterranean sea to the German ocean; the other was to be between the Rhine and the Danube. In the commencement of this last, a channel was dug, 300 paces long, equally wide, and sufficiently deep to admit of the men of war used at that time; but a variety of causes prevented the execution of this project.

RUMALDE,

(A.D. 840.)

AN architect of Louis the Pious, built the cathedral of Rheims,* using the materials of the ancient city walls,

* Felibien, Vie des Architectes, p. 173.

which were in great measure demolished for the purpose. This church has been celebrated as the most magnificent of that time;* but all the descriptions are confined to the front of the altar, which was of massive gold, studded with gems; a statue of the Virgin, also of gold; and many sacred vessels of great value. Such riches are, however, but trifles, compared with architectural magnificence.

TIETLANDUS,

TOWARDS the end of the tenth century, superintended the building of the church and monastery of Einsidlen, called the hermitage of the Virgin, situated in the mountains of Switzerland, a celebrated sanctuary, which has acquired considerable treasures. Eberhard, the founder and first superior, learned in architecture, began the building, which he afterwards transferred to Tietlandus, an architect. The church is in the form of a cross, with three towers; the smallest is in the centre of the cross, and the others, which served for belfries, are at the two sides of the nave.

* Description Historique et Satistique de la Ville de Rheims, tom. i. p. 307. The walls were previously demolished by Charles Martel. Saint Rigobert afforded the materials for the building of this church, which was not finished till the tenth century, under Hincmar, who had it paved and glazed, and dedicated it anew in the presence of his suffragans and Charles the Bald. Above the door of the left arcade of the grand façade of the present church, is sculptured a representation of the first, which, according to Flodoard, was richly gilt. It was flanked by round towers, covered with pinnacles, and resembled a castle. It was destroyed by fire, 24th July, 1210.

BUSCHETTO OF DULICHIO,

(Eleventh Century,)

OF Greek origin, and a renowned architect, was employed at Pisa,* in the erection of the cathedral, one of the most sumptuous edifices of that period. It consists of five naves, and is entirely composed of marble within and without, enriched with a variety of columns,† which the Pisans, when a powerful people, imported from distant countries. Buschetto with much difficulty arranged the various fragments of antiquity, as bases, capitals, and cornices, which had been collected from different parts. The plan of this church is a Latin cross: its length, from the face of the wall to the back of the recess, is 311 feet; the width of the nave and four side aisles 106 feet 6 inches; the length of the transept 237 feet 4 inches; and the width, with its side aisles, 58 feet. The centre nave is 41 feet wide, and has twenty-four Corinthian columns, twelve on each side, all of marble, 24 feet 10 inches high, and little more than 3 feet 2 inches in diameter. On the capitals of these columns the arches rest, over which is another order of columns, smaller and more numerous, forming an upper gallery, anciently appropriated

* In 1063, Giovanni Orlandi returned to Pisa, bringing with him six richly laden vessels, the fruits of a victory obtained by him at Palermo. The Pisans resolved to commence a magnificent cathedral on this occasion, and to dedicate their spoils to the Supreme Being; and in 1063 or 1064, the first stone was laid, under the pontificate of Alexander II., Henry III. being emperor, and Widone, or Guidone, of Pavia, bishop of Pisa; and, according to an ancient document, it was finished in 1092.— See MORONA'S *Pisa Illustrata*.

† Vasari, vol. i. p. 226.

for the use of the females. The four side aisles have also isolated columns, of the Corinthian order, but smaller, and raised on high plinths, to give them the effect of ranging with the others. The transept has a nave and two side aisles, with isolated columns the same size as those of the others.

The soffit of the great nave and of the transepts is of wood gilt; but the smaller naves are groined.

The height of the great nave is 91 feet, that of the transepts about 84 feet, and that of the lesser naves 35 feet. In the centre nave are four piers, on which rest four large arches, supporting an oval cupola. More than one hundred miserable windows give light to the building.

A circular flight of fifteen steps surrounds the edifice. The façade* has five stories: the first consists of seven arches, supported by six Corinthian columns and two pilasters, the middle arch being larger than the others: the second has nineteen arches, supported by eighteen columns and two pilasters: the third is curious, as, where the side aisles finish, the façade contracts and forms two lateral inclined planes, whence in the middle are columns with arches on them, as below; the columns which are in the two inclined planes gradually diminish in height: the fifth story is the same, and forms a triangular pediment, the columns as they approach the angles becoming more diminutive.

The two exterior sides of the temple have two orders of pilasters, one over the other. The roof of the great nave is supported externally by a wall decorated with columns,

* The extreme width of the western front, measured above the plinth moulding, is 116 feet, and the height from the pavement to the apex of the roof 112 feet 3 inches: the two lower stories occupy half the height, and together constitute the proportion of a double square; or the whole height may be said to be divided into six parts, two of which are given to the lower range of arches, and each of the others to a gallery or loggia.

with arches resting on the capitals. The whole of the building is covered with lead.

The drum of the cupola is externally ornamented with eighty-eight columns, with arches, over which are pediments in marble, which form a species of crown. On the south side is the tomb of Beatrice, mother to the famous countess Matilda, formerly having this inscription : *

Quamvis Peccatrix sum Domna vocata Beatrix.

In Tumulo missa jaceo quæ Comitessa.—

Such lines were then the most exquisite productions of the human intellect. The architecture of this temple, however absurd its ornaments may be, is not entirely in the heavy taste of what is called modern Gothic. The proportions of the whole are not contemptible, and have some solidity.†

Buschetto died at Pisa, where is his sepulchre, with an inscription purporting that he was a clever mechanic, ‡

* *Theatrum Basilicæ Pisanae*, vol. i. p. 7.

† To the architect Buschetto we are indebted for one of the most superb specimens of the Lombard style of building to be found in Italy, a style contemporary with and somewhat similar to the Norman, every where to be met with in England: both are Roman in their arrangement and construction. The cathedrals of this period were, no doubt, built in imitation of the Roman basilicas, by which name many of them are still called. They only differ in their plan by having the addition of a transept, which was adopted by the early Christians to give the figure of a cross to their structures. It was the taste of these times, to acquire magnificence by a multiplicity and littleness of parts, and not by simple and majestic proportions; to produce effect by a gorgeous display of various-coloured marbles, mosaics, gilding, &c. and not by elegant forms.

‡ One of Buschetto's three epitaphs at Pisa:—

Quod vix mille boum possent juga juncta movere,

Et quod vix potuit per mare ferre ratis,

Buschetti nisu, quod erat mirabile visu,

Dena puellarum turba levavit onus.

knowing how to remove great weights with little labour. He left many pupils, whose names are not known. Some practised at Pisa, others at Lucca and Pistoja, where, by order of the republic, then in its zenith, was built the church of St. Martino, which is considered the first in the city.

DIOTISALVI.

HIS birth-place is unknown, a circumstance much to be regretted. In 1152 he commenced the baptistery of Pisa,* and after eight years finished it. This edifice, which is almost opposite to the cathedral, is a rotunda, surrounded by three steps. It is 100 feet in diameter inside the walls, which are 8 feet 6 inches thick. On the exterior are two orders of Corinthian columns, the lower ones attached to the walls; over their capitals are semi-arches. In the upper order, the columns are more numerous and detached, allowing space to walk behind them, each arch of the lower order having two columns above it.

Over the arches of the second order is an embattled corona, composed of many triangles, or pediments, in each of which is a figure, as well as one at the top. Between these triangles arise little steeples, or pinnacles, all minutely sculptured with flowers, or crockets. Over the second order is a cupola in the form of a pear.† The

* *Theatrum Basilicæ Pisanæ*, vol. i. p. 91.

† This building is covered with a double brick dome, the inner one conical, the outer hemispherical. An aisle is formed round the interior by eight granite columns and four piers, from which spring semicircular arches that support a gallery. Above this are twelve piers, on which rest the semicircular arches that sustain the conical dome. Within the outer wall are contrived two staircases, that communicate with the various

drum is decorated with pilasters, over which is another corona, in the taste of the first. The convexity of the cupola is divided into twelve compartments by crocketed strings which unite at the top, surmounted by a statue of St. John the Baptist; and between these compartments are windows, ornamented with a variety of small columns crowned with pediments and flowers. The whole height is about 170 feet: the cupola is covered with lead and tiles; the rest of the edifice is marble.

On entering, you descend three steps which surround the church. Steps may be used externally, to give majesty to the temple; but to place them within, and to descend, is against all reason, though used here with the intention, as it appears, of making a species of amphitheatre, for the convenience of the spectators, and to enable them the better to observe the ceremonies. Twelve isolated columns form an aisle, over which is another supported by pilasters, also isolated, which are over the columns. From these arches and columns springs the groining. In the centre is an octangular bath, the ascent to which is by three steps. Within the bath are four little wells, and in the middle is the font, having at the top a bronze statue of St. John the Baptist.*

galleries within and without this building. On the ground plan are four entrances, and between each two are five columns, making a total of twenty, that surround the lower story on the outside. Above is a second story of sixty columns, with semicircular arches in the same style as those below; and on this commences the work which somewhat resembles our pointed style.

* In the interior, on piers of the lower story, are inscriptions, stating that the building was erected by Diotisalvi in 1153; and on the wall, 3 feet from the floor of the inner gallery, over the aisle, is the following inscription, cut in the character of the middle ages: "A.D. 1278, ædificata fuit de novo." Here the masonry of the wall differs, and the mouldings of the interior precisely correspond with those of the Campo Santo, known to have been executed under the direction of John of Pisa, in 1278, as a long inscription bears witness. The shields

TIODAS,

AN architect of merit, who built in the ninth century several remarkable edifices in Oviedo, by the order of the king, Alphonso the Chaste, who fixed his residence there.

The first edifices which we have any account of in Spain, after that kingdom was lost to him, is that of Santa Croce, near to Pangas in Asturias, erected by order of the king, Don Tafilas, son of Don Pelagio, and of his wife Froylisba, in 739. This church is of a moderate size, entirely of stone, having arches and vaults, strongly constructed, without any ornament, dark, and having another subterraneous church for the sepulture of the founders, according to the custom of those ages.

A century after, Don Alphonso the Chaste established his court at Oviedo, a city founded by his father, Don Fruela; and there built, according to the design of the architect Tiodas, the basilica of Salvatore, with two other churches at the sides; one to the Madonna, the other to St. Michael. The basilica Salvatore was demolished in 1380, to erect the present cathedral; but the two others still remain. That of Santa Maria is 100 feet wide, divided into three naves, with six arches, all on pedestals. The

which are on the windows of the dome contain the arms of a person who lies buried in the baptistery. Under a flat stone, on which is cut a pointed arch, cusped, resting on columns, with pinnacles, crockets, &c. is a figure of an old man in a cap and gown, and his hands crossed, with an inscription rather mutilated, to the memory of the "operarius," or architect, which bears the date 1396. To this person may be attributed all the work in the pointed style, together with the domes, which were constructed before Brunelleschi was employed upon similar works at Florence.—See *Architectural Antiquities of Great Britain*, vol. v.

great chapel and the two collateral ones, which were finished, are well proportioned, and are adorned with famous marbles. The others still remain with that poor and heavy roof which was placed in the first instance as a temporary covering. That of St. Michael has two pavements, the inferior covered with a strong vault, the more to elevate the superior, and to preserve it from the humidity natural to that country. The ascent to the superior, which is called the holy room, is from the transept of the cathedral, by a flight of twenty-two steps. The first thing to be observed is a hall 20 feet high; from thence you pass through an arched door into another smaller hall, not so lofty; from which you descend by twelve steps to a church ornamented with many delicate works, 25 feet long, and 16 wide, the vault of which, although resting on the walls, appears supported by six columns of different marbles, over which are the twelve apostles, two to each column.

The pavement is a mosaic of different stones, laid in a hard composition. This basilica was dismantled. The small chapel has the same mosaic, but is lower than the rest of the church, as is generally the case with those of Galicia and the Asturias, and is badly lighted.

Tiodas also built the royal palace, ornamented with pictures, which is supposed to be the one now inhabited by the bishop. This edifice is praised by king Alphonso the Great in his chronicles: "*Cujus operis pulchritudo plus præsens potest mirari quàm eruditus scriba laudare.*" It is rare that those works which are praised in writing answer the expectations of the spectator: too generally the description surpasses the reality.

The church of St. Julius, without the walls, is also the work of Tiodas, a magnificent building, and more resembling modern Greek than the Gothic.

None of these buildings now merit the eulogiums be-

stowed on them by the historians of antiquity, though they certainly did then. Tiodas was great for the age in which he lived, as he gave strength and general proportions to his edifices, and ornamented them in various ways. He was distinguished and rewarded by Alphonso I. and his successor Don Ramiro, who gave him the management of two other churches, a little distance from Oviedo.

The largest of these, called St. Maria, is plain, both externally and internally; of a good plan, well proportioned, and so solidly constructed, that it is yet beautiful and entire. The other, St. Michael, is small, being only 40 feet long and 20 wide, but of such beautiful proportions, that all our most famous artists both admire and praise it. Its exterior presents a great diversity of parts: cupolas, large chapels, and belfries, are all looked at with pleasure when separate, and, united, form a beautiful whole. On entering, the spectator is astonished at the lofty vaulted roof, the two flights of steps to ascend to it, and the convenience and uniformity of the windows. The whole building is Gothic, although somewhat of the Roman style. In the transept are twelve marble columns well arranged. On this plan many of the first churches of Spain were built.

VIVIANUS.

(Eleventh Century.)

THE memory of this artist is preserved in the following inscription, which is in St. Peter's of the Mountains, in

the diocese of Astorga in Spain, on a square stone, and in Gothic characters :—

Quem tegit hic paries dictus fuit hic Vivianus,
 Sit Deus hic requies Angelicaque manus.
 Iste magister erat et conditor ecclesiarum
 Nunc in eis sperat qui preces poscit earum.

Among the many churches designed by this master, is that near Pegnalba, of a singular figure. The body is composed of two parallel lines, leaving a space between them of a little more than double the whole width, and its extremities terminate semicircularly. In the centre of the two walls are two large columns, entirely of marble, resting on the wall, from whence springs an arch. Two other similar columns, with arches, are at the entrance of the semicircles : thus the church is divided into two squares. Within the semicircles are altars ; one serves for a chapel, and is vaulted. The door, composed of two arches over three columns, is on one side. The whole of the church, except the semicircular end, which is used as a chapel, is surrounded by a species of close and covered walk, where the monks are interred.

PETER OF USTAMBER,

(Eleventh Century,)

By order of king Ferdinand of Castile, took down the old church of St. John the Baptist, of Leon, and built another of stone, dedicated to St. Isidorus, whose remains were removed from Seville. Within this church is the sepulchre of the architect, a lofty tomb of polished stone, with an inscription, which imports that he also

built the bridge called Ustamber. The same inscription panegyrises the supernatural abstinence of the architect, and makes him famous for miracles.

The Gothic style lasted in Spain till the time of Alphonso the Sixth, under whom a correspondence was opened with France and Italy, when several noblemen and foreign literati settled in Spain. The Gothic liturgy was abandoned for the Roman, French writings preferred to the Gothic; and among so many novelties was, moreover, that of the introduction of German architecture, which was, in fact, another Gothic.

**CASSANDRO, A ROMAN, AND FLORINO,
A FRENCHMAN,**

WERE the two architects appointed to preside over the rebuilding of Avila, which, together with Segovia and Salamanca, remained in a ruined state, in consequence of the continual incursions of the Mahomedans. King Alphonso the Sixth committed the restoration of Avila to his son-in-law, Count Don Raimondo of Borgogna, who, to rebuild and people it, invited from various parts illustrious men, artificers and labourers, of every description. The undertaking was commenced in 1090 by 800 men,—all under the direction of Cassandro and Florino.

ALVARO GARZIA,

BORN in Estella, in Navarre, built in Avila the cathedral, with the tower and fortress, which in ancient times had been the royal palace. These buildings were begun in 1091, and were not finished till sixteen years afterwards. They are built of rock stone, and destitute of any order. There are some fluted columns, of a red colour, the remains of Roman buildings, according to the inscriptions which are on some.

MAESTRO RAIMONDO,

OF Monforte, in Lemos, rebuilt the cathedral of Lugo, for which the bishop, the canons, and the nobles, stipulated, in 1139, to give the architect an annual salary of 200 soldi; and in case of there happening any change in the specie, six marks of silver, thirty-six changes of linen, seventeen loads of wood, shoes and boots as many as he might require, every month two soldi for meat, a quart of salt, and a pound of wax. Maestro Raimondo agreed to this, and undertook to assist in the work every day; but dying before the completion, was succeeded by his son. The cathedral was finished 1177. It has three naves; the side ones are not lofty, as there is a high gallery above them: at the four angles are four towers. It is strongly built, of white marble, well worked, and supported on strong arches.

At the same time lived the two saints following, who practised architecture from a desire of doing good.

ST. GIOVANNI OF ORTEGA,

OF noble birth, the son of Vela Velasquez, was born in Fontana d'Ortunno, near Burgos. To arrange the differences in Castile between the queen Urraca and her husband, Don Alphonso of Arragon, he undertook a pilgrimage to Jerusalem, where he retired to the rigors of Montesdosa, and there built a church, a monastery, and an hospital, still existing under the Jews. He built also a bridge on the Ebro near Longronno, and laid the foundation for another at Nagera; also one near St. Domingo, which he finished, more than 100 paces long, over a river which had in a great degree become stagnant. He moreover filled up a marshy road, and made it so firm that it still remains. In consequence of the number of bridges built by this holy man, it has been said of him, "Pontifices à ponte faciendo." But from the time of that pontificate, in which the Ponte Publicio was built, how many pontificates have there been without bridges!

ST. DOMINGO OF CALZADA

LIVED very retired, and imitated St. Giovanni of Ortega, in repairing roads, in clearing forests, the place of refuge for banditti, in building bridges, embankments, and an hospital, with a church bearing his name.

He introduced the German architecture, improperly called Gothic; in Spain it soon arrived to that beauty of which it is susceptible, as may be seen in the cathedral

at Leon, which is not large, but valuable for its elegance, its proportions, and its simplicity. It has three naves, with chapels, slender pillars, with bold arches, and vaults 125 feet high. The whole is of squared stones, well united, on a massive basement: the architect is unknown.

The twelfth century, under Alphonso VIII., was fortunate in the number of cathedrals erected in Castile, as we shall see hereafter.

F U L B E R T .

(Eleventh Century.)

HE was bishop of Chartres, and being instructed in architecture, undertook the charge and direction of rebuilding (1020) his own cathedral, which had been three times destroyed by fire.* Many kings, princes, barons, and gentlemen, vied with each other in their contributions

* Hist. Manuscrite de l'Abbaye de Saint Père de Chartres. Notice Historique et Descriptive sur l'Eglise de Notre Dame de Chartres, par A. P. M. Gilbert, p. 5, &c.

Bishop Fulbert died 10th April, 1028, and is supposed only to have built the crypt. Thierry, or Theodoric, succeeded him, and continued the work till his death, in 1048. Maud, widow of William the Conqueror, in 1088, covered the nave with lead. The two bell-towers and the grand portal were erected about 1145. The work, which was 130 years completing, was dedicated, 1260, by Pierre de Mincy, the sixty-sixth bishop. The spire and tower was commenced by Jean Texier in 1506, and finally completed in 1514. The choir is enclosed by a stone screen, the work of T. Bovdin, 1612. The windows are glazed with coloured glass, which throw "a dim religious light" around the whole edifice.

to this cathedral, the most solid and beautiful in France at that period.

It is 396 feet long, 101 feet wide, and 106 feet high; its transepts 195 feet long and 36 wide; the great nave 43 feet wide, and the small lateral naves each 20 feet wide and 48 high: and its whole width is 106 feet 7 inches. The transepts have also aisles, and the choir has double ones. Where the great naves intersect the cross nave, are seven chapels, the same height as the aisles, but differing in their opening and depth. The subterraneous vaults, supposed to have been begun by the Druids, contain the same number of chapels, and extend round the church.

MARCO JULIANO

(Twelfth Century)

WAS not an architect by profession, but had great taste and ability in the fine arts. We know nothing more of him than that he founded, at his own expense, an hospital at Venice, of which he was the architect.

BUONO,

AN architect and sculptor of the first class in his time, was employed in 1154, by Domenico Morosini,* doge

* Vasari, *Vite de' piu Excellenti Pittori*, &c. tom. i. p. 248; and *Venetia Descritta da M. Francesco Sansovino*, p. 294, &c.

of Venice, to erect the famous bell-tower of St. Mark. This work has no other merit but its solidity, being well built and piled: and after so many centuries there has not appeared a single crack; a very different fate to that which has usually attended other towers of the same description. It is 330 feet high and 40 thick. It is not known from whence Buono came: we know only that he executed many works elsewhere; in Naples, the Capuan castle, now called the Vicaria, and the castle of Vovo; at Pistoja, the church of St. Andrea; at Florence, he gave the design for enlarging the church of Santa Maria Maggiore, the majestic walls and vaults of which still remain; in Arezzo he built the town-house, with a bell-tower. In the works of Buono there is not so much of that barbarous arabesque as was common at that time.

In 1178 the doge, Sebastiano Ziani, sent for two architects, whose names are unknown, one from Lombardy, the other from Constantinople. The Lombard, who by some has been called Niccola Barattiero, removed from Greece to Venice two marble columns, of extraordinary height, which he erected in the square of St. Mark, between which criminals were executed.

He afterwards built a wooden bridge at Realto, and performed so many other useful works, that the republic assigned him a considerable yearly pension.

The architect from Constantinople rebuilt the church of St. Mark, which is more esteemed for the richness of its material and the delicacy of its work than for its size, being entirely of marble, enriched with precious stones internally, and with gold on the exterior: whence it derived the title of the gilded church. Every part is loaded with sculpture. Under the portico are a quantity of figures, representing the principal workmen employed in the building. Among these is an old man, with his finger on his lip, signifying (as the Venetians say) the architect of Constantinople, who impertinently told the

doge, that, however beautiful the church might appear to the Venetians, it was nothing to what he had it in his power to design.

The plan is a Latin cross, having five naves. There are as many cupolas, of a hemispherical form, with terminations like the church of St. Sophia, at Constantinople. Within and without there are more than 500 marble columns. The exterior portico alone, which has five arches, has two orders of columns, one over the other, amounting to 292. Over this portico is a covered gallery, surrounded by balustrades, or, rather, small columns, to the number of 364, which are carried round the whole exterior circumference of the church. Above this gallery are the four famous horses, of Corinthian metal, which were attached to the arch of Nero, and which the Venetians removed from Constantinople. At the end of the gallery, and corresponding with the five gates of the façade, are five other arches, supported by a number of porphyry columns. These are united together by a variety of friezes, sculptured in festoons and leaves of marble, with various figures; and between the intervals of the arches are niches, in the form of little bell-towers. We must observe that all the arches are round.

PETER DI COZZO OF LIMINA

Is said to have been the architect of that famous saloon in Padua, the largest in the world, which is thought to have been begun in 1172.* In the basement are ninety large piers, disposed in four piles, supporting arches. There are

* Voyage en Italie, tom. ix. p. 30.

the same number of piers on the ground floor, the ascent to which is by flights of four steps; which, dividing on each side, lead to two galleries, 17 feet wide, and the whole length of the edifice: these galleries are supported by columns, and defended by balustrades of marble. The form of the saloon is a rhomboid, parallel to the equator, 256 feet long, 86 wide, and 72 high. It was finished in 1218, and in 1306 was covered with lead, by the advice of the brother, John Agostiniano, who had, as a reward, the first covering, which he used over his own church of the Hermitage, that being previously covered by one of straw. Perhaps this brother added to the saloon the palace of the Anziani and of the Podesta. This great edifice suffered by fire in 1420, and was quickly restored by the two architects Veneti Rizzo and Piccino. It was, in 1756, dismantled by a storm, and again repaired by the celebrated Ferracina, who added to it a meridian, which may be considered equal to the wonderful ancient picture of the signs of the Zodiac and of the planets; but there are, moreover, images of Christ, of the Madonna, of the Magdalen, of St. Paul, the first hermit—all the work of Giotto, restored by Giusto, and designed by Peter of Albano, as is said, of whom there is an honourable memorial in the saloon. It contains many other memorials and statues, of Titus Livius, of Speron Speroni, of Lucretia Orologi Obizzi, of Bianca de' Rossi; and many others will yet be erected by the well-regulated patriotism of so conspicuous a city, for which the writer of this preserves the most tender and affectionate esteem, in gratitude for the education which he there received. It is to be hoped that Padua will yet render herself more illustrious by her new Academy of Science. Admiring its many gifts, it received a noble addition to them from his excellency the Signor Gerolamo Zulian, ambassador of the most serene republic to Rome; a man estimable for his rare endowments both of the mind and the heart: he had

engraven, at his own expense, a large topographical map of Padua, delineated with every possible exactness by Count Stratico, professor of mathematics in the university of Padua.

GULIELMO, OR WILLELMUS,

WAS a German architect, who with Bonano,* a Pisan, commenced, in 1174, the celebrated bell-tower of Pisa,† behind the choir of the cathedral in that city. This edifice is of marble, 177 feet 10 inches in height, circular on the plan, and surrounded by 200 columns, having arches instead of an entablature over the capitals. It cannot boast of beauty in design nor rarity of material, but has a singular inclination of 15 feet ‡ out of the perpendicular. Whilst constructing it, the architects were not careful to sufficiently secure by piles the foundation or ground-work; before it was half completed the walls gave way, which obliged them to strengthen the foundation on the inclining

* Vasari, *Vite de' piu Excellenti Pittori*, &c. tom. i. p. 251.

† *Theatrum Basilicæ Pisanæ*, vol. i. p. 130. M. De la Lande, *Voyage en Italie*, tom. iii. p. 165.

‡ The clear lower diameter is 24 feet, and the thickness of the wall 13 feet 5 inches. The upper diameter is 25 feet 5 inches, and the thickness of the wall 9 feet. The lower story on the outside has fifteen half columns attached to the wall. Above are six stories, each formed by a peristyle of thirty columns, with a walk around, between them and the wall, and above these another, which contains the bells, making altogether eight ranges of columns, one above the other, including the ground story. There is a staircase of 293 steps, contrived in the thickness of the wall; and the interior is without floors, excepting one between the seventh and eighth stories.

Tommaso, a Pisan architect, is supposed to have perfected this tower in the fourteenth century. It evidently is the work of different periods.

side with great promptitude. The same thing occurred to the Garisenda of Bologna, though in a less degree; and this being of a square form, clearly shews, in the opinion of many, that the rotundity of the other, in some measure, contributed to prevent its fall. Others think, that the bell-tower was purposely built with this inclination; but an attention to the jambs and the courses of the stones, which are all broken and pendent, will counteract this opinion. Almost all the towers of Pisa, as well as many level lines and supports of the cathedral, also the observatory erected in 1755, incline towards the south, in the direction of the Anio, the soil there being the weakest.

The bell-tower of the cathedral at Rotterdam was also inclined; but an architect has restored it to the perpendicular, by building some additional walls.

SUGGER,

AN abbot of St. Denis, was esteemed one of the most learned men in architecture. He rebuilt, in 1140, the church of St. Denis, near Paris, made magnificent additions to it, and himself wrote the description of it.* The length of this church is 335 feet, and the width, from the middle nave, 39 feet. The vault is of an equal elevation in every part, and supported by slender columns and strings of the same delicacy. It is lighted by three orders of windows, the most lofty of which are 40 palms high, but narrow, and 3 feet distant from each other.

* Many intelligent persons imagine that the chapels of the chevet were constructed by Suggester. William of Nangis says, that Eudes Clement built the church as at present. The author of the little chronicle observes, that in 1231 this abbot renewed a part of the building, and continued his work to the choir, and that Mathew de Vendomme finished the building, 1281. — FELIBIEN, *Hist. St. Denis*, p. 227, &c.

MARCHIONE,

(Thirteenth Century,)

AN architect and sculptor of Arezzo, was selected by pope Innocent III. to erect the church and hospital of St. Santo Spirito, in Sassia, at Rome, afterwards rebuilt by Paul III.; the church of St. Silvester; the-tower of the Conti, so called because this pope was of the Conti family; and in Santa Maria Maggiore the chapel of the Presepio, afterwards restored by Sextus V. In Arezzo, his country, he built the parish church and the bell-tower.* The façade had three orders of columns, one over the other. These columns were of various sizes; some very large, others equally small, carved from the top of the base; some wreathed like vines, others placed together two and two; some tied together four and four; and the greater part supporting a species of corbel, representing divers animals, carved with most extraordinary act and caprice. The whole forms an extravaganza void of all proportion.

All the architects of that time had some little knowledge of sculpture, and applied it to their edifices without either judgment or taste. Their merit consisted in whimsical ornaments, and a total neglect of those beautiful proportions and judicious rules so scrupulously attended to by the Greeks and Romans.

* He does not appear to have built much more than the portal to the parish church at Arezzo, as the campanile and the façade, and a great part of the church, were the works of 1300, a period later than his time.—See *Note to Vasari*, vol. i. p. 254.

ROBERT DE LUSARCHE

GAVE the design, in 1220,* for the cathedral of Amiens, which was continued by Tommaso of Charmont, and finished by his son Rinaldo, 1269.

This is decided by an inscription, cut in the pavement of the church, in the centre of a marble compartment, in the form of a labyrinth, where are the figures of these three architects.† The principal nave is 213 feet long, without the choir, which is 153 feet long: thus the entire length is 366 feet. The transverse nave is only 182 feet, and its width 49. The choir, the nave, and the transept, are surrounded by small aisles, 18 feet wide and 42 high, which have also recessed chapels. There are few edifices so beautiful or so large; its only defect is the too great elevation of the roof, which is 132 feet high—a defect common to all edifices of this kind.

ESTIENNE DE BOUVEIL

WAS sent, with ten other master builders, from Paris to Switzerland, to construct the church of the Trinity at Upsal, after the style of that of Notre Dame, at Paris.

* Felibien, p. 205.

† Description de l'Eglise Cathédrale d'Amiens, par Maurice Rivoire, p. 18.

TANCREDI DE PENTOMA

BUILT the public fountain at Aquila, called La Rivera, on which were sculptured ninety-nine heads, all different from each other, and throwing a copious supply of good water from their mouths. The following inscription is still visible:—

Urbs nova fonte novo, veteri
quoque flumine gaudet,
Hoc opus egregium, qui cer-
nit ad omnia laudet.

Non mireris opus, operis mi-
rare patronos,

Quos labor et probitas Aquila
fecit esse Colonos.

A.D. M.C.C.L.X.X.I.I.

Magister Tancredus de Pentoma
de Valva fecit hoc opus.

JEAN DE CHELLES, PIERRE DE MONTEREAU,
EUDES DE MONTREUL.

TOWARDS the middle of the thirteenth century* these three architects flourished in France. The first built the church of Notre Dame, at Paris, and the portico at the end of the transept, towards the palace of the archbishop.

Peter de Montereau built the Holy Chapel at Vincennes,

* Felibien, p. 208.

the refectory, the dormitory, the chapter-house, and the chapel of Notre Dame, in the monastery of St. Germain des Prez, and the Sainte Chapelle at Paris. All these works are in one style. Although the above-named chapels are small, they are, nevertheless, deserving of admiration for the delicacy and beauty of their general proportions. This architect and learned man died in 1266, and was interred in the chapel built by him at St. Germain des Prez, his effigy being carved on the tomb, with a rule and compass in his hand.

Eudes of Montreuil was much esteemed by St. Louis, king of France, and was taken by him on the unfortunate expedition to the Holy Land, and employed to fortify the gate and city of Jaffa.

On his return to Paris, this architect built a number of churches, by order of the king; among which are those of St. Catherine du Val des Ecoliers, de l'Hôtel de Dieu, de la St. Croix de la Bretonnerie, des Blancs Manteaux, des Mathurins, des Cordeliers, and les Chartreux. He had two wives; one, named Matilda, distinguished for her virtue, accompanied the queen to the Holy Land. He died 1289.

ST. GONSALVO, ST. PETER GONSALVO, AND ST. LORENZO.

THESE three saints and architects *, of the order of Dominicans, lived in Portugal about the 13th century.

The first built at Amaranto, his native place, a stone bridge, and a church which was afterwards dedicated to him.

* Felibien, p. 212.

The other built a bridge of stone near Tui, in Galicia, the place of his nativity.

And the third also built another, in like manner, called the bridge of Cavez.

PIERRE, AMELIE, GILLES DE STEENE, SALOMON DE GAND, NICHOLAS DE BELLE, LAMBERT DE KENLE, AND THEODORIC.

AMONG the number of monks* who at this time applied themselves to the study of architecture, the most learned were some Cistercian abbots, who built in Flanders the church and monastery of Dunes.

Pierre, seventh abbot of the place, commenced the work with the intention only of repairing the ancient edifice, and making some aqueducts and canals for the convenience of the habitation. But, not finding such repairs sufficient, he undertook, in 1214, the entire rebuilding.

His successors, above mentioned, continued the work with great ardour. Nicholas de Belle surpassed them all in his knowledge and love of architecture, and in the grandeur of the edifices which he erected during his long government of twenty years.

Lambert of Kenle carried on the works, which were completed by Theodoric, 1262. The masons, sculptors, carpenters, builders, artists, statuaries, in short, whatever workmen were wanted to construct and ornament a great building, were monks of the same monastery, which contained altogether 400 priests and lay brothers.

* Felibien, p. 213.

L A P O,

(Died 1262,)

So called by the Florentines,* for an abbreviation of Jacopo, was a native of Germany, and acquired great reputation by the church and convent of Assisi. He divided the church into three stories. The lower one was the crypt, with two churches above, one over the other. That in the middle was level with the ground floor, and was surrounded by a grand portico, which served as a sort of terrace to the upper church, which was approached by a commodious flight of steps. It was in the form of a T, five times longer than broad. The two stories were divided by large stone pilasters, from which sprung strong arches. The crypt was destined to receive the body of St. Francis, and was inaccessible to every one. This building was finished in four years (1218). In Florence, where he died, Lapo built various edifices, of which there remains only a part of the façade of the archiepiscopal palace, and the Bargello palace.

FUCCIO,

A Florentine sculptor and architect,* built the church of Santa Maria at Florence, on the Arno, (1229, as Vasari says,) and finished the Vicaria at Naples, and Castel dell'

* Vasari, tom. i. p. 255.

† Ibid. p. 271. Vita di Niccola e Gio Pisani.

Uovo, begun by Buono. He erected the gate over the Volturno at Capua, and enclosed two parks with walls, for the chace, one at Gravina and the other at Melfi.

NICCOLA OF PISA

ACQUIRED a great name, both as an architect and sculptor. His first work was the Dominican church and convent at Bologna. He erected many buildings in his own country, remarkable for their strength, notwithstanding the lightness of the soil and swampy state of that city. He was extremely cautious in first piling the foundations, he then erected large piers, and upon these raised arches to carry the superstructure. With these precautions he built the church of St. Michelle, and some palaces; but his most ingenious work was the bell-tower of the Augustines.* This edifice † is octangular without, and circular within, having a winding staircase, with an opening in the centre like a well: on every fourth step is a column; the arches which rest on them are distorted, and are continued round in a spiral line with openings to the centre, so that from the bottom you are able to see all who ascend. These sort of staircases are consistent for towers, and where necessity may require them; but it is absurd to introduce them upon a large scale where it is possible to make them in the ordinary way.

This architect built the church del Santo at Padua; in Venice, that of the Minor Brothers; and gave the sketch

* Vasari, tom. i. p. 273.

† For a representation and further description of this tower, see vol. ii. of Morona's *Pisa Illustrata*.

of a design for the church of St. Giovanni in Sienna, and for the church and monastery of the Santa Trinita at Florence; which is simple and devoid of embellishments, but so majestic in its proportions, that Buonarotti frequently contemplated it, and ever with increased pleasure, calling it his lady. Niccola also made designs for the Dominican convent at Arezzo, and St. Lorenzo at Naples, whither he sent one of his pupils, named Maglione, a sculptor and architect, who, besides the work in question, built many tombs and other edifices. Niccola embellished and enlarged the cathedral at Volterra, and the Dominican church and convent at Viterbo. At Naples he erected a church and a magnificent abbey on the plain of Tagliacozzo, in memory of the decisive victory gained by Charles I., of Anjou, over Corradino. Some suppose that the cathedral of Naples was the work of Maglione. It is entirely Gothic; but the great gate, by a certain abbot, Antonio Bambocci, of Piperno, is perfectly grotesque. The church was enriched with 110 antique columns of fine marble, which are no longer visible. For the supposed purpose of embellishing the church, they have been walled round and encrusted with stucco. Such barbarisms have been committed elsewhere, and even in Rome.

Niccola was employed in the church of Santa Maria, at Ovietto, and finally retired to his own country, where he died, but at what time is unknown.

MASUCCIO,

(Born 1230, died 1305,)

A Neapolitan architect and sculptor, completed Castel Nuova and Santa Maria della Nuova, commenced by Giovanni of Pisa. He erected the archiepiscopal palace in the Gothic style; in the church of St. Dominica Maggiore he evinced a better taste, and excelled in the proportions of St. Giovanni Maggiore. Among the number of palaces built by him is that which now belongs to the prince of Colombrano.

MARGARITONE,

AN architect, painter, and sculptor, of Arezzo, after having built the governor's palace and the church of St. Ciriaco, in Ancona, was deputed, in his own country, to execute a design of Lapo's for the cathedral; but the building was nearly stopped in consequence of the money intended for that purpose being expended in the wars between the Florentines and the Arentines. Margaritone lived till the age of 77, overcome with various misfortunes, among which was the vexation of finding his credit diminish in proportion as that of the other professors increased. The greatest fault of old age is having too tenacious a reliance on its own wisdom, and the idea of a total absence of all talent in youth; while it is, in fact, not uncommon to see young men fully qualified to give lessons to their seniors, who are often incapable of profiting by them,—time weakening the mental as well as the corporeal faculties.

MARINO BOCCANERA,

A native of Genoa, commenced the mole there, for the foundation of which he threw into the sea stones of an immense size, taken from the neighbouring mountains. To him is also attributed the wet dock, which had been previously begun by others, and the basin called the Mandrocchio, for the convenience of vessels, as well as some aqueducts. In the year 1300 he enlarged the port, digging it to a depth of 15 feet, and 115 cubits along the shore. This family has produced many illustrious men.

ARNOLFO

(Born 1232, died 1300,)

WAS born at Florence, studied architecture under his father, Lapo, and became the most renowned architect and sculptor of his time. He built the new walls of Florence, and ornamented them with towers. In the same city he formed the square now called St. Michel, the square of the Priors, the abbey and the church of Santa Croce, 482 feet 6 inches long and 133 feet wide, in which is the portrait of Arnolfo, by Giotto. For these and other works, the Florentines were so pleased that they elected him one of the corporation. He afterwards gave a design and model for the church of Santa Maria del Fiore, which is the cathedral of Florence. In 1288 the foundation was laid with great cere-

mony, and with so much judgment and solidity, that Brunelleschi was afterwards enabled, with complete success, to raise the great cupola on them. This cathedral, intended by the Florentines to be the finest in the world, is 462 feet long, the transept 315, and the whole width 70; the height of the middle nave 133 feet, and of the lateral ones 91. The external circuit of the whole church is 2443 feet. It is entirely of stone, and in many parts enriched with marble of various colours, particularly on the exterior. There are two porticoes on the flanks. In the frieze of one are some fig-leaves, well sculptured, which are supposed to be the arms of Arnolfo. This architect shewed some slight glimpses of good taste. The same may be observed of the painting of Cimabue, his contemporary. But in every thing, physical as well as moral, the progress to excellence is by insensible gradations. The corrupt style, called *Gotico tedesco*, was continued for some time after that of which we are now writing.

PIETRO PEREZ

(Died 1290)

WAS the architect of the cathedral of Toledo, which has five naves, surrounded by chapels of white stone, 404 feet long, 202 wide, and the principal nave 116 high. It has the same defect of obscurity as that of Burgos.

In the fourteenth century many magnificent works were executed in Spain: the grand cloister of the cathedral of Toledo, the famous bridge of the archbishop over the Tagus, the rebuilding of San Martino, the arsenal of Seville, and many other buildings; the architects of which are unknown.

ROBERT DE COUCY

(Died 1311)

WAS employed, in 1297, to finish the church of St. Nicaise, at Rheims, which was not very large, but esteemed for the delicacy of the work and the proportions. He had also the principal management of the cathedral,* which was rebuilt after its conflagration in 1210. The former church was 420 feet long, 150 wide, 100 high, with two towers 262 feet high, and ornamented with a prodigious number of columns, figures, and every sort of sculpture, particularly in the principal façade.

JEAN RAVI,

AN architect and sculptor, who was employed at Paris, for the space of twenty-six years, in the great church of Notre Dame, which he finished in 1351.†

This Gothic church is the most considerable of France. It is 413 feet long, 156 wide, 198 high, including the towers. The nave is 89 feet wide, of a beautiful elevation, well lighted, and regularly planned. The transept is the same width, and equally beautiful with the nave, which is flanked by double aisles, leading to thirty-five chapels, magnificently decorated. The choir and sanctuary corre-

* Description Historique et Statistique de la Ville de Reims, par J. B. F. Geruzez, tom. i. p. 308.

† Felibien, Vie des Architectes, p. 227.

spond also in style with the rest. Above the double aisles are spacious and high galleries or porches, vaulted with stone. The façade is flanked by two square towers, 204 feet high. The whole edifice is of stone; and it must be remarked that the foundation is on piles. The expense of the whole was increased by the ornaments, which, if they do not produce an interesting whole, present in every part something worthy attention, particularly in painting, sculpture, gilding, marble, bronze, wood, and iron-work.

ERWIN OF STEIMBACH

(Died 1355)

WAS engaged twenty-eight years in building the cathedral and bell-tower of Strasburgh,* which has been since completed, after his designs. Among the specimens of modern Gothic, this is the most stupendous. It is similar in style to that of Rheims and Paris, except the ornaments, which are very minute, and innumerable. The nave and choir are about 120 feet high; the arms of the cross, and the part which flanks the church, are less. The façade is singular; it is about 240 feet high, and the tower, which occupies a great part of it, rises above this immense elevation 334 feet: thus the whole height of the tower, from the ground to the top, is 574 feet. This tower is square, the whole width of the façade, and at the three sides expands into wreaths of fret-work. At the termination it becomes octangular, open on all sides, and has four exterior flights of steps, which are continued to where the principal tower becomes conical or pyramidal, by means of seven steps, and is crowned at the

* Description nouvelle de la Cathédrale de Strasbourg, par François Miler. 6me edition.

summit with a species of lantern. The number of the columns and figures in this edifice, which resembles a pinnacle, is wonderful.

In the interior, near one of the large piers of the transept, is the statue of the architect, Erwin, which appears leaning over the balustrade of the upper corridor and looking at the opposite piers. The ornaments in the frieze of this church shew the taste of the times in which they were conceived. A pig carrying the holy water, followed by a number of other pigs and asses, all clothed in the sacerdotal habit; a procession of apes, a fox enshrined, a nun *accouchée* by the side of a monk, and other similar extravagances, were chosen to satirise the times: but satire does not always produce a salutary effect.

To Erwin succeeded John Hiltz, of Cologne, who continued the tower, which was finished in 1449 by an architect of Suabia, whose name is unknown.

HUALLPA RIMACHI YNCAS,

AN American architect and engineer, who built the fortress of Cusco, the capital of Peru and Chili, which may be esteemed astonishing when compared with other buildings of these kingdoms.

To have a perfect idea of this wonder of America, we must be allowed a digression, which will be grateful to every one possessed of a humane heart.

About the middle of the thirteenth century, Manco Capac became the Romulus of this empire, which he extended in length 1300 leagues; with this difference, that Romulus, sword in hand, and followed by a band of malefactors, proclaimed himself the son of Mars,—while Manco, unarmed, and without partisans, called himself

the Child of the Sun, sent to improve mankind, whom he led like the beasts. He shewed them those arts most useful to man, he employed them, made them more tractable and peaceable, and did not multiply their wants in order to subdue them. He governed with such prudence, and so acquired the good opinion of the barbarians, that they elected him their chief. He afterwards founded the city of Cusco, which in a short time became the Rome of this vast dominion. Universal happiness was the object of his legislation; he encouraged the practice of the useful arts, and the exercise of religion, by which means he hoped this end was to be attained. Idleness was regarded as a public theft; the lame and the blind were employed, either in driving birds from the corn, or in other offices adapted to their capacity. The sciences were discouraged as much as the arts were fostered; the former were considered as conducing to idleness. M. de Fontenelle has observed, that the Americans were happy in not being acquainted with science; like the Spartans, they endeavoured to preserve themselves from that contagion which corrupted their neighbours. America was enabled by these means to surpass even Europe, with all her arts. It is easy to compose such accounts when the art of writing is acquired. "We," said Montezuma, "cannot write, and yet we can record events." Bridges were here raised without a knowledge of that principle of building in water, now practised by Europeans. The Spaniards found in America some extraordinary works, such as stones of a prodigious size raised to a great height without machines. Among the arts agriculture ranked the highest, and the king every year ploughed a field with a golden plough, which then, becoming sacred, was placed in the temple. Military discipline was extremely strict, and the spirit of conquest was always directed by benevolence. Their system of education was equally extraordinary; the youth were but slightly punished, but the greatest severity

was exercised towards the parents, for not having restrained the inclinations of their children at an early age. Thus was known and practised at Peru that important truth, inculcated by the sublime genius of Bacon, of Verulam, that so many laws to reform men would become useless, if care were taken in the first instance to form the habits of infancy. The incas, or kings of Peru, successors of Manco Capac, co-operated to complete this great plan, so favourable to the best interests of mankind.

Cusco was situated in a beautiful plain, at the foot of a mountain, between two rivers. Its form was quadrangular: in the centre was a grand and beautiful square, from whence proceeded four magnificent streets, still remaining, which conducted to the four parts of the Peruvian monarchy. Here was the Temple of the Sun, the ruins of which are still regarded with wonder: the walls are formed of stones 15 or 16 feet in length, porous and irregular in their form, but united so exactly that no opening was left between them. The walls and the roof were externally covered with massive gold. To the north of the city, on the ridge of a mountain, was the famous fortress, the principal architect of which was Hallgia, who had under him three other architects and engineers, Ynca Maricanchi, Acahuanna Yncas, and Calla Cunchuy. This fortress consisted of three parts, one within the other: the centre one was the palace of the incas, the walls of which were encrusted with gold, and engraven with animals and trees, of the natural size. The grass, plants, and large trees in the gardens, were all of gold, of the most exquisite workmanship. There were also beasts of every description, in the same metal; but here gold and stone are not regarded of much value. In this fortress there are stones more than 40 feet in length, removed from a distance of 400 leagues, along inconvenient roads: among them is one so stupendous, that it surpasses all imagination; it was called the stone of weariness or fa-

tigue, on account of the great labour it required to move it. It was the architect Calla Cunchuy who had it brought forty Indian miles; but it could not be placed where it was originally intended. The interior works of the fort were most artfully contrived with secret staircases, and without arches, the Peruvians not knowing how to strike them. Nothing now remains but the exterior walls, which shew that the whole would have stood the test of ages.

There are also the ruins of many edifices, called by the Peruvians *tambos*, the walls of which are of granite, and the stones, which are worked, appear as if they had been rubbed against each other—so perfectly are they united.

There are in one of these *tambos* some faces, the nostrils of which are drilled, and support moveable rings, cut out of the stone. All these edifices were situated along the magnificent street which conducted across the cordillera from Cusco to Quito, a distance of 500 leagues. Another street, of the same length, equally ornamented and convenient, led to another part. The bridges, canals, the spacious streets in every part of the empire, the fortresses,—all were on an immense scale. But it is wonderful such works could have been performed by the Peruvians, who had neither iron, steel, cement, nor mortar; and were so ignorant of mechanics, as to be unacquainted with either the compass, rule, square, or any mathematical instrument, and had neither oxen nor horses. We may, therefore, cease to be astonished at what has been done by the Egyptians, the Chaldeans, the Chinese, the Greeks, or the Romans. It is, however, surprising, that an empire so wisely regulated and governed for three centuries by twelve incas, each of whom was a Marcus Aurelius, should be in an instant conquered and destroyed (1534) by a handful of Europeans, not Turks or barbarians, but Spaniards, guided by Francisco Pizarro, captain of his Catholic majesty:

“ Nous seuls dans ces climats nous sommes les barbares.”

The easy conquest obtained by a few Spaniards over an empire so vast, and possessing so many excellent laws, must not be attributed entirely to the use of artillery and fire-arms, which appeared to these Indians like so much thunder, nor to our cavalry, which were taken for a multitude of centaurs: the principal cause was, that Athualpa, the thirteenth king, the Caligula of Peru, had rendered himself odious, and the people were, for the first time, divided into factions. One bad prince overthrew all that virtue and knowledge that had been acquired by the new world in the course of three centuries. This nation relapsed into a more barbarous state than it was before the time of the incas; it was brutalised and enslaved. Legislation has the power to render noble what is vile, and to strengthen that which is weak; it in some degree resembles chemistry, which transforms iron into steel.

These descriptions are greatly exaggerated; the boasted streets of Peru were but 15 feet wide, and used only by foot-passengers. The bridges were composed of willows, interlaced like a net, and covered with branches of trees and earth: they were elastic, and, of course, unsafe. Every thing was performed by manual labour; and in order to raise enormous masses, they heaped earth against the edifice, which they removed when the work was completed, and the stone was afterwards properly worked.

CHAPTER III.

THE ARCHITECTS OF THE FOURTEENTH
CENTURY.

GIOVANNI OF PISA,

SON and disciple of Nicola of Pisa,* was a sculptor and architect, and acquired a great reputation at a very early period. He erected the Campo Santo of Pisa, a public cemetery, to which are consigned the wretched remains of mortality, it having been anciently forbidden by the council to inter the dead in churches.

This cemetery is a rectangle, † 550 palms long and 160 broad, surrounded by a covered walk, with an open area, like a cloister. The southern side is externally cased with white marble, with forty-four pilasters, also of marble. The ambulatory round is formed by pilasters, on a high plinth, between which are small columns with arches above, filled in with Gothic tracery. The walls are about 29 feet high, and enclose many tombs of illustrious men: they are adorned with paintings, and the roof above is covered with lead. Queen Christina of Sweden named this not a cemetery, but a museum. The uncovered area is divided into three parts, and contains

* Vasari, tom. i. p. 280.

† This quadrangle has not its sides quite at right angles: at the east end the clear width is 136 feet 10 inches, and that of the west 140 feet; the length between the walls on the south side is 415 feet 10 inches, and on the north 430 feet 8 inches.

that holy earth which the fifty Pisan galleys sent to Palestine to assist the Emperor Frederigo Barbarossa, in 1228, brought from Jerusalem.

Giovanni of Pisa was called to Naples, where, by order of Charles I. of Anjou, he built Castel Nuovo—to erect which, he was obliged to demolish the church of the Zoccolanti, which then occupied the site: he afterwards rebuilt it, and it was then called Santa Maria Nuova. On his return from Naples, he erected at Sienna the façade of the cathedral, which is very magnificent; at Pisa, the great tribune of the cathedral; and, after having executed many works in architecture and sculpture, at Arezzo, Orvieto, Perugia, Pistoja, and elsewhere, he died full of years and honour, and was buried in the Campo Santo, near his father Nicola.

The plan of the cathedral at Sienna is a Greek cross, 300 feet long and 180 feet wide: it has three naves; the centre one, and also the transept, supported by fascies, each composed of four small columns. Those which face the great nave are very lofty, and have their capitals above the cornice, the great projection of which conceals a part of them. The small columns serve as imposts for the lesser arches of the great and lateral naves. All the arches were originally pointed, but have since been made circular. Edifices should be left as originally built, be the style what it may: they serve as histories, and enable us to compare modern works with those of posterity. To the chapels of the small naves have since been placed some heavy circular frontispieces, which look as well in this cathedral as a cardinal would do among the Sarmatians. The façade is richly ornamented; it has three doors, between columns of admirable sculpture, among clusters of pilasters, with a mass of capitals on them: over each door run a number of bands, above which rises an embattled pediment, the top of which cuts an entablature of bad style, which is in the centre of

the façade. At the extremities are two pilasters, supporting horses and oxen, over which rises a bell-tower, formed of small columns or pilasters, with very narrow openings, and crowned with pyramids or small towers, embattled. Corresponding and over the middle gate, are raised two other bell-towers, similar, but higher. Between these four towers are three triangular pediments, embattled, with statues on the top. Over the two lateral fronts are five pointed arches, supported by as many isolated small pilasters.

GIOTTO

(Died 1334)

WAS born in Vespignano, a villa in the vicinity of Florence: he shewed so great an inclination for the arts, that at the age of ten years he amused himself by drawing on stones or on the sand, whilst in the occupation of a shepherd. Cimabue found him in the act of drawing a sheep on a stone which he had polished with a piece of rock. The artist, astonished at such an instance of genius, by his father Bondone's permission, conducted him to the city, and instructed him in painting, in which Giotto made such progress, that he soon far excelled all the painters that had preceded him for many centuries. His reputation increased, and he acquired honour and riches. He also became an excellent architect, and superintended many considerable edifices; among them is the bell-tower of Santa Maria del Fiore, for which he made both the design and model. This tower* is square;

* The clear internal dimension on the ground plan of this tower is 21 feet 1 inch, and the thickness of the walls 10 feet 8 inches. At each

each side is 25 braccia long. Its height is 144 braccia, but it does not terminate, according to the original design, in a species of quadrilateral pyramid, 50 braccia high; this termination appearing to those who completed it barbarous and Gothic. Giotto had a penetrating and powerful intellect. While at Naples, painting for king Robert, he was commanded to draw a picture of the kingdom of Naples. Giotto painted a saddled ass, smelling at a new saddle which lay on the ground, which he appeared desirous of having on his back, instead of the one already there. The king saw the drift of the painter, and acknowledged that it contained some truth.

AGOSTINO AND ANGELO OF SIENNA

WERE two brothers, and the most illustrious disciples of the school of Giovanni of Pisa. Their ancestors were also architects of the twelfth century. Agostino, in 1308, made a design for the palace of the new magistrates, who then governed Sienna; and thereby acquired so much reputation, that he and his brother Angelo were chosen to superintend the public edifices of the city. They erected the northern façade of the cathedral, made two new gates to the city, began the church and convent of San Francisco, and the church of Santa Maria, in the

angle, on the outside, is a half-octagon, which continues to the top: there is a staircase within the thickness of the wall, which communicates to the five stories and the roof. The whole height, from the pavement to the top of the parapet, is 280 feet 2 inches. The cornice which supports the parapet is very bold: the whole of the exterior is of Gothic design, and inlaid with marble and mosaic, and may be considered one of the finest specimens of campanile in Italy.—See *Descrizione di S. Maria del Fiore, da Bernardo Sansone, Sgrilli.* 1733.

square of Manetti. They erected the great fountain in the square before the Hôtel de Ville, the Hall of the Grand Council, and finished the tower of the Public Palace. In Assisi, in Orvieto, in Arezzo, and in Bologna, they executed various other works in architecture and sculpture. The precise time of their death is unknown.

Giacomo Lanfrani, their pupil, erected the church of San Francisco, in Imola; and in Venice, that of St. Antonio.

ANDREA OF PISA,

(Born 1270, died 1345,)

WAS an excellent sculptor and architect: he made the design for the castle of Scarperia, built at Mugello, at the foot of the Apennines. To him is also attributed the design and the model of the church of San Giovanni, begun at Pistoja in 1337. This edifice is a rotunda, and well constructed for those times. But what conferred most honour on Andrea, were the works which he erected at Florence, by order of Gualtieri, duke of Athens, who then governed that city. He fortified and increased the ducal palace, which was afterwards divided into many others; he surrounded Florence with towers and magnificent gates; and also made the model for a small citadel, which would have been built in the quarter of San Georgio, but for the expulsion of the duke from Florence. Andrea was held in great estimation by the Florentines, who elected him a citizen, loaded him with riches, and raised him to the magistracy. It is said he made the design for the arsenal at Venice.

Among his pupils in architecture was distinguished

Tommaso of Pisa, by some supposed to have been his son. He finished the chapel of the Campo Santo, or cemetery, and the bell-tower of the cathedral at Pisa.

TADDEO GADDI, A FLORENTINE,

(Born 1300, died 1350,)

EXCELLED in architecture and painting both Giotto, his master, and Andrea of Pisa, in concurrence with whom he undertook a number of important edifices. He restored the foundation of the Loggia, now called San Michele, and over these loggi, or galleries, built vaulted magazines for public granaries. He rebuilt the old bridge, 48 feet wide, 24 for the passage, and as many for the shops, of which there were twenty-two on each side. In this work nothing was spared that could add to its solidity or beauty; it cost sixty thousand gold florins. He also repaired the castle of San Gregorio, finished the bell-tower of Santa Maria del Fiore, and executed various other edifices.

STEFANO, CALLED MASUCCIO THE SECOND,

(Born 1291, died 1388,)

WAS a disciple of the before-mentioned Masuccio, but more correct in his style of architecture. While at Rome studying the various monuments of antiquity, he was

called to Naples by the king, Robert, to erect the church of Santa Chiara ; but being prevented from an immediate attendance to the mandate, the edifice was commenced in the Gothic style, to the great vexation of Masuccio ; and it is to be regretted that a style so redundant in gilding, stuccoes, &c. should ever be preferred to one of a purer and more simple character. The work in question cost 100,000 ducats, and was under the direction of the engineer D. Giovanni del Gaizo, who has certainly produced an effect calculated to please the vulgar, but not to satisfy the taste of the more refined.

Giacomo de Sanctis was a disciple of this Masuccio : he died in 1435, after having built various palaces at Naples : amongst which, that of Balzo, in the piazza of San Domenico Maggiore, now Il Banco del Salvatore ; it has been modernised externally, and is now neither ancient nor Gothic. He also built the church of Santa Maria delle Grazie, near San Agnello, the church and monastery della Croce de Palazzo, the magnificent Carthusian monastery of San Martino, and the castle of San' Elmo. He finished the church of San Lorenzo, which had been begun by his master, built the church of San Giovanni, at Carbonara, and a number of sepulchres ; being both sculptor and architect, as was usual at that time. The bell-tower of Santa Chiara is his work, and was intended by him to serve as a specimen of the five orders of architecture. It was to have had five stories : the first, Tuscan ; the second, Doric ; the third, Ionic ; the fourth, Corinthian ; and the last, the Composite. But this immense tower still remains at the third order. It is perhaps worth observing, that the Ionic pilaster of this edifice has the necking a module below the capital, as was practised some time after by Buonarrotti.

ANDREA OF CIONE ORGAGNA,

(Born 1329, died 1389,)

AN architect, painter, sculptor, and poet of Florence. His designs were preferred before many others for the enlargement of the piazza, which the Florentines intended to make before the Palace, with porticoes, galleries, and a mint; and to him was entrusted the whole management of the work. The loggia, entirely of stone, open at the two sides, was built with great care; and instead of the pointed arches, which had been so universal, had semicircular ones, turned with grace and elegance. Between the arches of the front façade were seven figures in half-relief, alluding to the cardinal virtues. Buonarotti was so much pleased with this loggia, that when asked by Cosmo I. for a design for the senate-house, he answered, that he should only continue the loggia of Orgagna round the square, as he could never produce any thing superior. But the work having already cost 86,000 florins, the prince was discouraged at the expense, and relinquished his intention. This loggia was unfortunately situated to the north, and in the winter was inaccessible from the great winds. It had a tabernacle, or chapel, to receive an image of the Virgin, which was small, and in the Gothic style, but curious for the work, and the extraordinary manner in which the marbles are united, neither mortar nor cement being used, but iron cramps covered with lead. This great artist was respected for his moral qualities, and for his easy and agreeable manners, which gave him a superiority over all his contemporaries.

His brother, Jocapo, an architect and sculptor, built the tower and gate of San Pietro Gattolini at Florence.

WILLIAM OF WYKEHAM,

(Born 1324, died 1414,)

WAS born in the village of Wykeham,* and was from a youth so much esteemed in the university of Oxford, that king Edward III., knowing him to be learned in the belles lettres, philosophy, and mathematics, and being moreover attracted by his majestic figure, took him into his service, and employed him successfully in many political affairs. Wykeham, being well versed in architecture, was made by the king superintendent of the royal edifices and of the fortresses. He made the design for the palace at Windsor, which was finished in three years. Some invidious persons endeavoured to draw the monarch's displeasure on him for an equivocal inscription in the palace, but were unsuccessful. Being made an ecclesiastic, he acquired a number of benefices, and became secretary of state, keeper of the privy seal, bishop of Winchester, high chancellor, and finally president of the privy council. But the sun of his prosperity was soon overshadowed, which is not uncommon with the favourite of a court; he was stripped of all these riches, and persecuted. He retired to his bishopric, and there founded a college after his own design, and designed and founded a similar one at Oxford. He was afterwards restored to his situations; but he preferred a total retirement, and lived really like a bishop, that is, in the exercise of benevolence. He built, according to his own plan, a magnificent cathedral at Winchester, which was little inferior to St. Paul's at London. Notwithstanding his beneficence towards the poor, he was accused of various misdemeanours, but declared innocent by the parliament.

* See his Life, by Robert Louth, D.D.

GIOVANNI FRANCH,

A Spanish architect, who constructed the tower of the cathedral at Valencia, which was begun in 1381, and finished in 1414: this work was entirely of square stone, of a rectangular figure, 207 palms high, its circumference being the same.

To Milizia's account of the architects of the middle ages, may be added the names of some of the prelates and bishops who superintended, and probably gave the designs for those religious buildings in England, so much admired for their solidity, majestic proportions, and beautiful construction. It is to be regretted that we are not more fully informed of the manner in which these works were conducted; as more mathematical skill is practised in the tower and spire of Salisbury and Louth, in the stone roof at King's College chapel, Cambridge, and in Henry VII.'s chapel at Westminster, than in any of the boasted buildings of Greece or Rome.*

* To the architect there are no studies equal in point of value to what our buildings of the middle ages afford; and the whole profession will ever be indebted to the indefatigable exertions of Mr. Britton, who has brought so many fine specimens to notice—represented in a manner which confers honour on the country and the arts: it is to be hoped that he will be long blessed with health, and encouraged to continue his labours, not ceasing until every fragment of our national architecture is engraved. The collection he has made to illustrate the biography of English architects is very considerable; and at some future time may be expected from him

Previous to the Norman Conquest, in 1066, we have few or no remains sufficiently authenticated to enable us to name the builders. The Norman style introduced into England at that period consisted of semicircular arches, resting on round, square, or polygonal pillars, low towers, with a total absence of pediments or pinnacles. The doorways were generally highly decorated with zig-zag ornaments, large tori or rounds, with animals on the outer edge, embattled frets, billets, and other mouldings. The doors were sometimes square-headed, and the tympanum of the arch filled with sculpture. The windows had no mullions, and the capitals of the piers or shafts were rudely carved with various grotesque devices.

In the eleventh century, Gunduph built the nave, west front, and ancient chapter-house belonging to the cathedral at Rochester, as well as the keep of the castle; Simeon commenced the present cathedral at Ely; Archbishop Lanfranc that of Canterbury; William de Carilepho began the church at Durham, which was completed by Ralph Flambard, in the most costly style practised by the Normans; Remigius rebuilt the cathedral at Lincoln; Walkelin constructed a great part of that at Winchester; Elphage repaired Bath Abbey church; Robert Losing completed the choir and part of the nave at Hereford, and Raynelm the rest of the church; Herbert Losing was employed at the same time at Norwich, where he built the east end choir and ailes of the cathedral; Walter commenced a new church at Evesham; Wiketellus began to rebuild the abbey of Croyland, which was restored by Ingulphus after a fire; Paulinus rebuilt the church at

a complete work upon this subject, which will form a desirable appendix to the present. In the five volumes of his "Architectural Antiquities," will be found many names and anecdotes chronologically arranged; and in the "Cathedral Antiquities," most of the works referred to in this catalogue, beautifully represented.

St. Albans, as well as most of the other buildings attached to the abbey; Baldwin built the church anew at St. Edmundsbury.

In the twelfth century, William Warlewast built the towers, and Quivill the Lady chapel, at Exeter; Peter de Liea restored the cathedral of St. David's; Earnulp erected the dormitory, refectory, and chapter-house at Rochester; Gilbert de Glanvill erected a new cloister at the same place, and built an episcopal palace and a mansion at Lambeth; Pudsey commenced a chapel at the west end of Durham cathedral, dedicated to the Virgin; Hugh de Grenoble erected the choir, eastern transept, and chapter-house, at Lincoln; Roger de Clinton re-edified and greatly augmented the cathedral at Lichfield; Godfrey de Lucy rebuilt the east end, and the Lady chapel, at Winchester; archbishop Roger built the crypt at York; Robert de Betune erected the north end of the great western transept at Hereford; Urban began to rebuild the cathedral at Landaff; Everard the nave and aisles at Norwich; at Ely, Richard completed the east end; Geoffry Ridel continued the work and tower; Eustachius built the galilee at the west end, founded the presbytery, finished the great western tower, and built the greater part of the palace; at Salisbury, Richard Poore commenced a new cathedral; Robert Bingham, his successor, continued the work; at Peterborough, Abbot de Saiis began to rebuild the cathedral, which was completed by Martin de Bec; William de Waterville remodelled the abbey, altered the choir, added the cloister, and founded the chapel under the middle arch of the porch; Benedict rebuilt the nave from the lantern to the porch; at Canterbury, William Senensis, a professional architect, was employed; he began the present choir and aisles, which were finished by William Anglus, who also built the eastern transept, Trinity chapel, and Becket's crown; at

St. Albans, Richard built a chapel; Geoffry erected a large and noble hall, and various other chambers; Ralph built the abbot's apartments, and Robert de Gorham covered the greater part of the church with lead; at St. Edmundsbury, Anselm built St. Andrew's chapel, repaired the west front of the church, and leaded the roof; he also rebuilt St. James's church.

Before the latter end of this century, a strange mixture prevailed in the buildings which were then going on, pointed arches being introduced with the circular ones. At the commencement of the thirteenth century, a magnificent and beautiful style of building, called the lancet or pointed, grew out of this, and was practised throughout England. The arches, pointed like a lancet, rested on clusters of slender detached pillars of Petworth marble, having quatrefoil mouldings, and groining of a light and simple design. Statues, of tolerable good workmanship, on pedestals, were placed in niches, with plain canopies. The windows, towards the latter end of this century, were made wider, and divided by mullions into many bays or days; their heads were curiously diversified with tracery work. Pinnacles, ornamented with crockets and finials, were placed on the tops of the flying buttresses, which were now made more conspicuous, and the central and western towers were surmounted with a spire.

In the thirteenth century, Joceline Troteman restored the cathedral at Wells; at York, Walter de Grey built the south, and John le Romaine the north transept, together with a part of the nave; Engidius de Braose erected the middle tower at Hereford; at Norwich, Suffield built the Lady chapel, Walpole the tower, part of the cloister, and chapter-house; at Durham, Prior Melsonby, Bertram Middleton, and Hugh of Darlington, erected the central tower, Bishop Poore vaulted the nave, and Prior Hotoun the choir; at Lincoln, the nave, great transept, and the lower

part of the centre tower, were performed by Hugh de Wells and Greathead, who also built the galilee; Walter de Langton vaulted the roof and founded the Lady's chapel at Lichfield; Walter Bronescombe finished St. Gabriel's chapel at Exeter; Thomas Becke laid the foundation of the Lady chapel at St. David's; Prior William de Hoo rebuilt the choir at Rochester; Nicholas de Acquila and Richard Poore rebuilt a great portion of Chichester cathedral; at Peterborough, Robert de Lindsey glazed thirty windows, Walter St. Edmonds finished the west front and its short transept, and probably roofed the nave, Richard of London erected one of the west towers, and William Parys built the Lady chapel; Henry de Estria erected the admirable screen at the west end of the choir at Canterbury; at Worcester, W. de Blois altered and improved the nave, and William de Bedeford erected the deanery; at Croyland, Richard of Bardney rebuilt the north aisle, Ralph de Marsh repaired the west front, with the towers, and rebuilt the tower beyond the choir, and St. Martin's chapel; John of Hereford built a noble hall at St. Albans, which he covered with lead, added also many chambers to the abbey, with chimneys; Simon de Luyton erected St. Mary's chapel at St. Edmundsbury.

In the fourteenth century, the niches became gorgeous tabernacles, and were filled with statues, of beautiful execution. The ribs supporting the groined ceilings, hitherto simple intersecting arches, branched out into tracery of various devices, and the intersections were concealed or covered by a boss or architectural knot. The arches of this period were generally well turned, and properly proportioned; they were invariably adorned with one or more cusps on each side of the head, so as to form trefoils, cinquefoils, &c. The pediments raised over them were purfled or crocketed; the sweeping cornices descended as low or lower than the springing of the arch, and gene-

rally rested on the busts of bishops, kings, or other founders or benefactors. During this period, H. Wakefield united the nave and west end at Worcester, and Thomas Cobham vaulted the greater part with stone; at Wells, Harewell built the south-west tower; at York, Archbishop de Melton completed the nave and west front, and Thoresby began the choir; at Norwich, Salmon finished the south walk, and Henry de Well the north side of the cloister, Percy built the spire and repaired the tower; at Durham, Hatfield erected the episcopal throne, the great hall of the palace, and the screen to the high altar; John Kirby completed the chancel and east end of Carlisle cathedral; at Winchester, William de Edyngton commenced rebuilding the nave, which was completed by William of Wykeham; Abbot Knowles began to rebuild the present cathedral at Bristol; Walter Stapledon and John Grandison erected the choir and nave of Exeter; Henry Gower put up the rood-loft at St. David's; John Langton built the spire at Chichester; Aban de Walsingham built the octagon and lantern at Ely, but it was completed by Simon de Montacute; at Canterbury, archbishop Sudbury re-edified the western transept, and prior Thomas Chillenden built the nave, cloisters, and chapter-house; Richard began the new church towards the east at Croyland; Exeter cathedral was groined, and its heavy Norman work changed into the light and elegant pointed architecture, by bishop Grandison.

In the fifteenth century, the arch became more depressed, the windows were more numerous and enlarged, and the stone-work was covered with a redundancy of ornament. The ribs of the vaulting were loaded with armorial bearings, badges, rebuses, and pendants. The buttresses were crowned with hemispherical cupolas.

Bishop Alcock built the beautiful chapel called after his name at Ely; at Peterborough, Richard Ashton erected

the new building at the east end, and Robert Kirton made a bow window in the great hall, and constructed a chamber in his house, which he called Heaven's Gate; at Canterbury, Thomas Goldstone built the south-west tower and porch, together with the dean's chapel; Edmund Lacy built the chapter-house at Exeter, and John Booth erected the throne at the same cathedral; bishop Dean built the choir at Bangor; Robert Tulley put up the stalls at St. David's; William Heyworth completed the cathedral at Lichfield; Silkestede built a chapel at the east end of Winchester cathedral; bishop King rebuilt the present Bath Abbey church, and bishop Beckington the buildings which constituted the dwellings of the monks; abbots Newberry and Hunt rebuilt the roof and aisles of Bristol; Thomas de Beckington erected the throne, part of the cloisters, and chapel of the Virgin, and bishop Bubwith the north-west tower, at Wells; Stanbury and Audley erected two chapels at Hereford; bishop Marshall decorated the cathedral at Landaff with an altar-piece of free-stone; at Norwich, the roof of the nave and stone screen were executed by bishop Lyart, and the stone roof to the choir by bishop Goldwell; Clement Litchfield built the high square tower at Evesham; at St. Albans, John de Whethamsted built a small chapel and many of the windows; John Stock, or Stoke, who built the divinity school at Oxford, and the library over it, new glazed the cloisters, &c., William Wallingford erected the rich and costly front of the high altar, and a chapel and tomb, in the south part of the church; at St. George's chapel, Windsor, Sir Reginald Bray is supposed to have acted as architect, as well as to Henry VII.'s chapel at Westminster.

In the sixteenth century, bishop Skeffington completed the church at Bangor; Edward Vaughan built the beautiful chapel of the Trinity at St. David's; prior Senhouse erected the square tower of the priory at Carlisle; bishop

Fox built the east end and Lady chapel at Winchester; abbot Newland erected the gate-house at Bristol; bishop Booth the north entrance or porch at Hereford; bishop Nix the stone roofs of the north and south transepts at Norwich; prior Goldstone and Selling raised the centre or bell Harry tower at Canterbury; Cardinal Wolsey founded Christ College, Oxford, &c. &c.

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OF THE
MODERN ARCHITECTS.

BOOK III.

**OF THE ARCHITECTS FROM THE RE-ESTABLISHMENT OF
ARCHITECTURE IN THE FIFTEENTH CENTURY TO THE
EIGHTEENTH CENTURY.**

CHAP. I.

**OF THE ARCHITECTS OF THE FIFTEENTH
CENTURY.**

FILIPO BRUNELLESCHI, A FLORENTINE,

(Born 1377, died 1444,)

A son of Lippo Lapi, was educated for the profession of a notary, which was his father's, or that of a physician, his great-grandfather's; but being ardently attached to mechanical pursuits, he was placed with a goldsmith: he then practised sculpture, and afterwards studied perspective, which was at that time entirely neglected, and by the strength of his genius its principles were materially improved: he studied geometry, read the sacred writings and the works of Dante: finally, he applied himself to architecture, and learnt much from the church of San Giovanni at Florence, which is built in a good style, and

very nearly approaching to the antique : but of far greater importance to him was the attention he paid to the ancient monuments of Rome, the best of which he measured and sketched with great accuracy. To him is attributed the glory of having first revived the three ancient orders, the Doric, Ionic, and Corinthian. How this agrees with what has been said of the bell-tower of Santa Chiara at Naples, built of the five orders by Masuccio II., the Tuscans and Neapolitans may decide, who are always claiming the glory of an invention from one another.

Brunelleschi conceived the idea of raising a cupola over the church of Santa Maria del Fiore at Florence, and went to Rome with a view of improving his knowledge on the subject, when his mind became so absorbed, that he scarcely allowed himself the rest which nature required, and was in such want of money, that he pawned his jewels to obtain the common necessaries of life. He then returned to Florence, and secretly made the designs and models for his cupola, but did not shew them to the deputies of the building, having had sufficient proofs of their ignorance, from the manner in which they generally conducted business. He simply stated his opinion, and set off again to Rome : as he expected, he was soon entreated to return to Florence, which he did immediately. He asserted that he could raise the cupola without any difficulty ; but first wished that the most eminent architects and engineers in Italy and Europe should be invited to offer their sentiments on this important affair. His wish was complied with ; and Brunelleschi went to Rome for the third time, to compare his design with the best models of antiquity. In about a year there were collected at Florence, at a great expense, artists from all nations, as if it was intended to make a cupola for the whole terraqueous globe ; and Brunelleschi being returned from Rome in 1420, a great assembly was called, consisting of the deputies or commissioners of the works, and of the

most learned and ingenious citizens. The extravagant and ridiculous opinions started at this meeting, will not be strange to those who are acquainted with the darkness which then covered Europe. Some projected piers, with arches over them, to support the beams for carrying the weight; others were for making one single pillar in the centre, and conducting the work after the manner of a tent. There were not wanting those who proposed forming a mound of earth, in which various pieces of money should be thrown, over which the cupola should be vaulted: as soon as the work had acquired the necessary solidity, the people were to receive permission to dig for the money, on condition of carrying away all the earth; thus leaving the cupola complete. That the Pantheon at Rome was built in this manner, is one of those follies which had gained credit for some time. Brunelleschi was of opinion that the work was to be done without any of these contrivances. He was, however, treated as a madman, and turned out of the assembly. He continued firm in maintaining that he could raise this mass with a double vault, so as to be able to walk between the two with staircases, lights, and passages. This assertion only drew on him the most bitter jests and taunts. He would not produce either model or design; but to turn the laugh on his adversaries, he made use of a stratagem practised towards the end of the same century by Christopher Columbus. He proposed to make an egg stand upright on a table. All present tried, but not one succeeded. Brunelleschi, striking off one end of it, performed the miracle. "We can do likewise!" was the universal exclamation. — "You will say the same when you have seen my model," replied Brunelleschi. At length, after a multitude of objections, of fears, and doubts, he was commissioned to raise the cupola, but only to the height of 22 feet, as an experiment. An architect called Lorenzo Ghiberti was appointed his colleague. At this affront,

Brunelleschi lost his patience; and, but for the interference of his friends, would at once have abandoned models, cupola, and Florence. He at length began the work, and soon afterwards feigned illness, that the workmen might receive their orders from his colleague: the latter, not knowing how to conduct it himself, plainly shewed his ignorance, and thus Brunelleschi remained sole director. As they proceeded, much time was lost: to repair this inconvenience, the architect erected small eating-houses on the building, supplied with whatever the workmen might require; thus removing the necessity for their descending.

Brunelleschi completed his undertaking, which surpassed in height any work of the ancients. The lantern alone remained imperfect; but he left a model for it, and always recommended, even in his last moments, that it should be built of heavy marble, because, the cupola being raised on four arches, it would have a tendency to spring upwards, if not pressed with a heavy weight. The three mathematicians who have written on the cupola of St. Peter's, have demonstrated a truth differing from that which Brunelleschi believed: viz. that the small cupola increases, in a great degree, the lateral pressure. The whole height of the structure,* from the ground to the top of the cross, is 385 feet; that is, to the lantern, 293 feet, this latter being 68 feet 6 inches; the ball 8 feet; the cross 15 feet 6 inches,—this,† as well as the portico which was to surround the drum, was never completed. Baccio d'Agnolo commenced a part of it in marble of Carrara; but it was not continued, Michael Angelo having said that it appeared to him to resemble an iron cage.

* *Descrizione di S. Maria del Fiore, da Bernardo Sansone Sgrilli, Architetto.* In this work are plans, sections, and dimensions of the church, in its present state, together with an historic description, in which it is said the dome was commenced in 1420, and finished in 1435.

† The plan of this dome is octangular: each side in the interior is 57 feet, and the clear width between the sides, not measuring into the

It is difficult to imagine why the cupola of Florence should have been so much thought of, when those of St. Sophia at Constantinople, of St. Mark at Venice, and of the cathedral at Pisa, had been already executed. It is true that they are not double, and are supported by arches, on four piers; whereas, that of Brunelleschi is erected entirely on the walls, and is octangular. What is particularly observable in the construction of this cupola, is, that there are no apparent counterforts.

Brunelleschi was called to Milan, by the duke Filippo Maria, to design a fortress, and on his second return he performed many works, not only for the duke, but at the famous cathedral of that place. At Fiesole, by order of Cosmo de' Medici, he built the abbey of the regular canons, on an extremely convenient plan, making it very ornamental and magnificent. From an inscription, we learn that Cosmo spent 100,000 crowns on this edifice.

Brunelleschi was also well acquainted with military architecture, and designed the fortress of Vico Pisano, the old and new citadel of Pisa, fortified the Ponte Amare, and made the model for the fortress of the gate of Pesaro.

He also built a great part of the church of St. Lorenzo* at Florence, 259 feet long in the interior, and full of many

angles, 137 feet; the walls are 16 feet 9 inches thick; the whole length of the church is nearly 500 feet. The nave has four pointed arches on each side, on piers, separating it from the side aisles. The transept and choir have no side aisles, but are portions of an octagon, attached to the base of the dome, giving the whole plan the figure of a cross. The edifice has a Gothic character, and is incrustated with marble and mosaic work.

* In this church there are seven columns on each side of the nave, which separate it from the side aisles and their chapels. The clear width between the columns is 37 feet, and between the walls, including the side aisles, 82 feet: the length of the nave to the centre of the pier of the transept is 179 feet 8 inches; across to the corresponding pier

errors, produced from envy or ignorance on the part of those who succeeded this able man. The pilasters on the steps have their bases higher than those of the columns, which are on the same level; a fault which might easily have been remedied, by placing under the base of the columns a plinth sufficiently high to have come level with those of the pilasters.

Cosmo de' Medici commissioned Brunelleschi to make him a design for a magnificent palace. No order could be more agreeable to the architect, an opportunity being afforded him of displaying his talent. He devoted himself entirely to it, and made a large and beautiful model for the palace, to be erected in a great square near St. Lorenzo. But the design appeared too sumptuous to Cosmo, and, fearing to excite the envy of his fellow-countrymen, he declined carrying it into effect. This so enraged Brunelleschi that he broke the model to pieces.

He was still more unfortunate in the church degli Angeli, which was commenced on a whimsical design. For want of money, this building was only carried up to the entablature. It is uncovered, and nothing is to be seen within it but the grass and vines which cover the walls. The design is preserved in the monastery de' Camaldosi at Florence.

40 feet 5 inches; and the depth of the chapel beyond 39 feet; making a total length of 259 feet 1 inch. The length of the transept, including the chapels at each end, is 171 feet. The columns of the nave are 2 feet 9 inches in diameter; their height, including base and capital, 28 feet; the entablature, which rests on them, is connected by semicircular arches, over which is a continued architrave, frieze, and cornice, 6 feet high, the top of which is 50 feet 7 inches from the pavement. Above, is an attic 20 feet in height, lighted by semicircular-headed windows, one over each intercolumniation. The ceiling of the nave is flat, and divided into coffer. Each of the four friezes of the lower entablature has on it a bas-relief of a lamb on a gridiron, enclosed in a wreath, between two cherubim,—probably alluding to the martyrdom of St. Lawrence.

He had, however, an opportunity of signalising himself in the noble Pitti palace, which he raised to the window of the second story.

This edifice is entirely of rustic work. The windows of the first story are arched; they have since been ornamented by Ammanati with elegant mouldings and triangular pediments. Between these windows are others more simple, placed a little above them. In the second story are twenty-three windows, without any ornament, with round holes in the centre of the archivolt, and a continued balustrade before them. There then rises in the centre a third story, likewise rusticated, which has seven windows, and on each side a balustrade, with statues at the extremities. The doors are 28 feet high and 14 feet wide, the windows being in the same proportion.

At this time there was shewn, in the church of Santo Spirito at Florence, a representation of Paradise. Above, was a sky full of moving figures and an infinity of lights, appearing and disappearing in an instant. This ingenious work, of which Vasari gives a long description, is attributed to Brunelleschi. He gave also the design for the church and convent of Santo Spirito, which were to be rebuilt. The church is 296 feet in length in the interior, and 84 feet 3 inches wide, clear of the niches; well arranged, rich in columns and other ornaments, light and elegant; and had his design been followed in every particular, would have been very beautiful.*

* The plan of this church is exceedingly well arranged, and consists of a nave, transept, and choir, with side aisles entirely round the building, together with forty large niches, containing thirty-eight altars, one being placed opposite to every intercolumniation. At the junction of the cross, four piers sustain a brick dome, pierced with circular windows. The general style and character of this building resembles that of St. Lorenzo; the columns are 2 feet 9 inches in diameter; the height, including their architrave, frieze, and cornice, is 31 feet 5 inches; the second, or continued entablature, above the semicircular arches, is 11 feet 6 inches

The fame of this great artist extended itself, and every one solicited his designs. He erected some embankments on the Po, for the marquess of Mantua. This prince used to say, that Florence was as worthy of having Brunelleschi for her citizen, as he was proud of having so noble and beautiful a city for his country.

Pope Eugenius IV. asked Cosmo de' Medici to send him an architect, for some building, with the name of which we are not acquainted. Cosmo sent Brunelleschi, with a letter, in which he said, "I send to your holiness a man of such abilities that he can move the world."

When the pope saw his small, slender, deformed person, he exclaimed, "Are you, then, the man who can move the world?" "Shew me," replied Brunelleschi, "where I can fix my lever, and this moment your highness shall see what I can do." It is not known what works he did at Rome: he, however, returned to Florence loaded with applause and honourable rewards.

Brunelleschi had a noble mind, an elevated talent, and an excellent heart. He was much esteemed in his own country, where he was elected a magistrate; but his worth was never so well understood as after his death. He was then universally regretted, and was buried with pompous ceremony in the church of Santa Maria del Fiore. Posterity has awarded him due honours. From his time is fixed the epoch of the restoration of good architecture.*

high, the top of which is 54 feet 4 inches from the pavement; the attic is 26 feet 7 inches high, and lighted by semicircular-headed windows; the length of the nave, including nine intercolumniations to the centre of the pier of the transept, is 186 feet 9 inches; thence, across the latter to a corresponding point, 42 feet 2 inches; and beyond, to the face of the wall at the end of the choir, in front of the niche, 63 feet 3 inches: the whole length of the transept between the walls, in front of the altars, is 168 feet 9 inches, and the width 84 feet 7 inches.

* Vite de' piu Eccellenti Pittori, Scultori, e Architetti, da M. Giorgio Vasari, tom. iii.

Among his many pupils, the most distinguished was Luca Tancelli, a Florentine, who carried on for Brunelleschi the Pitti palace, and for Leon Battista Alberti, among other works, the large chapel of the Annunciation at Florence. He also executed many works at Mantua.

ANTONIO FILARETE,

THIS sculptor, with Simone, brother of the famous statuary Donatello, made, by order of pope Eugenius IV., the bronze gate of St. Peter's. It is to be regretted that this work was not entrusted to some of the able men who then flourished, and who made those beautiful models for the gates of the baptistery of San Giovanni at Florence, executed by Ghiberti so exquisitely, that Michael Angelo said they merited to stand at the gates of Paradise.

Filarete understood architecture very well, at least if we may judge from the plan of the hospital at Milan, which he built, in 1457, by order of the duke Francisco Sforza,—a handsome and commodious edifice. The dwelling for the men is in the form of a cross, 304 feet long on each side, and 30 feet wide. In the intervals are four covered court-yards, with rooms for the assistants. A canal, which flows at the side, serves for domestic purposes, as well as to turn a mill. That for the females is of the same form, with a cloister between, 152 feet wide and 204 feet long. In the centre of the cloister is a church, which serves for both hospitals. Filarete* also built the cathedral of Bergamo, which was considered to be in a good style; but the same opinion was entertained of his

* Vasari, tom. iii.

book on architecture, which he dedicated, in 1464, to Pietro de' Medici, and which little deserves that opinion, for the many ridiculous and absurd things which it contains.

MICHELOZZO MICHELOZZI, A FLORENTINE,

WAS instructed in sculpture and drawing by Donatello, and, afterwards devoting himself to architecture, became one of the most celebrated architects of his time. Cosmo de' Medici, the father of his country, who would not carry into execution the design of Brunelleschi for his palace, because too sumptuous, had that built by Michelozzo, which now belongs to the marquesses Riccardi, and by whom it has been exceedingly enlarged.

This was the first palace built after a good style in Florence, the apartments being handsome, and conveniently arranged, worthy of receiving those kings, emperors, and popes, who have passed through the city. There is one very visible error; the window of the first story does not fall plumb with the middle of the door underneath. The entablature is rich in stone-work, but too heavy and massive for the edifice.

Michelozzo was so sincerely attached to Cosmo de' Medici, that when the latter was banished from Florence, in 1433, he followed him spontaneously to Venice, where he made many designs for public and private buildings; and in the monastery of San Georgio, of the black Benedictine monks, he erected the famous library, at the expense of Cosmo, to whom this building alone could give pleasure during his exile. On their return to their native country, Michelozzo repaired the palace of the Signory, now called the Old palace, which had been built

by Arnolf, of a square form externally, so that the rooms were awry and disproportioned: the court-yard had columns of various sizes, and consequently the arches were some large and some small, and the staircases were inconvenient and dark. Michelozzo enlarged and improved it, but not sufficiently, as we shall see hereafter.

Michelozzo built, besides, the convent of the Dominican fathers, and the house for the novices of Santa Croce. By the commission of the duke Cosmo, he built the palace of Cafaggiuolo, in Mugello, like a fortress; the palace of the villa Carregi; and at Fiesole another palace, on an ingenious plan, on the acclivity of a hill, making the substructions into cellars, stables, and other offices, and forming the rooms above them. He also gave a design and model for an hospital for those pilgrims which Cosmo sent to Jerusalem, and for whom he provided.

Whilst Michelozzo was in Assisi constructing a fountain, and performing some repairs to the convent, by order of Cosmo, he made a design for the citadel at Perugia. On his return to Florence, he built the palace of the Tornabuoni, now belonging to the marquess Corsi. The duke of Milan, Francisco Sforza, having presented Cosmo with a palace at Milan, the latter, to shew his gratitude for such a gift, sent thither Michelozzo to enlarge and beautify it with every sort of ornament. By order of Peter of Medici, he also erected within the church of di' Servi at Florence the chapel of the Annunciation, rich in marble and gilding, supported by four Corinthian columns of marble, 17 feet high, with double flutes, and all the members of the base and capitals sculptured in various ways: but whether a good effect has been produced, is for those to judge who have seen it. Michelozzo died aged 68, and was buried at St. Mark's, in Florence.*

* Vasari, tom. iii.

GIULIANO DA MAJANO, A FLORENTINE,

(Born 1377, died 1447.)

HIS father was a stonecutter at Majano, a village near Fiesole. Giuliano was first a sculptor, and afterwards an architect. Being called to Naples by the king Alphonso, he there built the magnificent palace of Poggio, which is a perfect square. In the centre, on each side, is an arched portico, at the wings of which are Ionic pilasters, on a high pedestal: on each side are rooms. The second floor has Corinthian pilasters, between which are windows, with a pediment. The entablatures are without projections or interruption: within is a perfectly square court-yard, with galleries to the two stories. In the centre of this court-yard is a flight of steps, also square, by which you ascend to a paved floor, embellished with seats, tables, and jets d'eau. To the Castel Nuovo of Naples he erected a gate of marble in the Corinthian order, like a triumphal arch, enriched with large figures and bas-reliefs, which are still in good preservation, but in so narrow a situation, and so surrounded by houses, that it is impossible to view them. He also made many whimsical designs for fountains in the squares and houses of private persons. Being called to Rome by pope Paul II., he made a court-yard in the palace of the Vatican, which appears to be that now called San Damaso, surrounded on three sides by galleries of three orders. But his principal work was the palace and church of St. Mark, where he employed a great quantity of travertine stone taken from the ruins of the Colosseum. But the destruction of that superb amphitheatre is of very ancient date: tradition says, that to build the palaces of Rome, particularly the Tornese, the

Colosseum was dismantled. The same Paul sent Giuliano to Loretto to enlarge the body of that church. He returned to Naples, to terminate the edifices he had begun, but was prevented by the hand of death, in the 70th year of his age. The king Alphonso regretted him exceedingly; and ordered fifty men, clothed in mourning, to assist at his obsequies, and erected a marble tomb to his memory.

Polito, or Ippolito del Donzello, finished the building.

Giuliano had a brother, named Benedetto, a clever sculptor and carver in wood, and also an architect. He built the cupola at Loretto, and made the design and model for the Strozzi palace at Florence.

PIETRO AND IPPOLITO DEL DONZELLO

WERE two brothers, Neapolitan painters and architects, disciples of the above-named Giuliano, who finished the buildings begun by their master. They erected, besides, many edifices from their own designs; among them, the magnificent Caraccioli palace of the princes of Santa Buono, in the square of San Giovanni, at Carbonara.

ANDREA CICCIONE

(Died 1455)

WAS a Neapolitan, and, among the disciples of Masuccio the second, was an eminent architect and sculptor. He

built the famous monastery and church of Monte Oliveto; the beautiful palace of Bartolomeo of Capua, prince of Biccina, and San Biago de' Librari. The third cloister of San Severino, in the Ionic order, and the small church of the Pontano, near the Pietra Santa, were afterwards executed from his designs.

LEON BATTISTA ALBERTI,

(Born 1398, died 1472.)

OF the noble Alberti family*, of Florence, was son of Lorenzo, and nephew of the cardinal Alberto, of the Alberti. A rare and almost universal knowledge of literature distinguished Leon Battista, who was canon of the cathedral at Florence. He was well versed in philosophy, mathematics, poetry, jurisprudence, and the fine arts. He could scarcely be less than a great man, as his noble relations were so attentive to his education, that every hour of the day was occupied by his various studies. He early and assiduously cultivated his noble talents, and never allowed a day to escape him without reading. He was familiar with painting and sculpture; and his knowledge in architecture was surprising, which he acquired by studying and measuring the ancient buildings, for which he undertook many journeys. His treatise *De Re Ædificatoriâ*, translated into the Italian by Bartoli, is an excellent work for architects, although somewhat overloaded with useless erudition. He merits to be considered as one of the principal restorers of ancient architecture, having happily re-established it both by theory and

* Vasari, tom. iii.

practice. He accompanied Nicolas V., who had a great love for building, and at whose wish Alberti repaired the conduit of the Acqua Virgine, and made the fountain of Trevi, which is now so modernised, that not a trace of the original design remains. For the same pope he made a design to cover the bridge of St. Angelo, which had not been the case since the time of Adriano, although a shelter from the heat of the sun was extremely desirable for the number of persons frequenting St. Peter's.

It is commonly asserted, that the principal façade of Santa Maria Novella, at Florence, which Rucelai constructed at his own expense, was built by Alberti; it is in the Gothic or German manner: thus there is more foundation for attributing it to Giovanni Bettini. The gate, which is very beautiful, is, without doubt, by Alberti; as are also the marble Corinthian galleries and the Doric façade of the Rucelai palace. In these galleries Leon Battista has observed a rule always attended to in antiquity, though afterwards as universally neglected; he did not place the arches on the capitals of the columns, because such arrangement would be false, but placed them on the architrave: this precept is now generally understood and followed.

At Florence, Leon Battista also erected the tribune della Nunziata, in the form of a round temple,—a work attended with some difficulty, and not destitute of either beauties or defects. The chapels are arched; and every one is aware that arches in a circular figure appear distorted,—an error into which many celebrated artists have fallen. In Mantua, for the duke Lodovico Gonzaga, he erected many buildings, among which is the church of St. Andrea; but the greatest part of the interior is spoiled, more particularly by the modern introduction of a cupola placed there, after a design by D. Filippo Giovara. What remains of the ancient work is imposing, well united, and generally evinces a good style of building, except that the pro-

jections of the cornices are small, the members too trifling, and the taste *petite*.

This is not the case in San Francesco, at Rimini, the most beautiful of all the buildings erected by this great man. It is easy to believe that the sight of the superb gate and arch at Rimini, on this occasion, furnished Leon Battista with his ideas. The plan which he made was for an addition to the old temple, which was not finished. Sigismondo Malatesta, prince of Rimini,—who had great talents and ingenuity, and so well versed in military knowledge, that to him is attributed the design of the castle at Rimini, now in great measure demolished, although by some given to Roberto Valturio,—commissioned Alberti to embellish the church of San Francesco. The interior still remains Gothic, with small chapels here and there, placed at some distance from each other. It is in part modernised by an order of pilasters, which, from the impost of the chapels, are carried up to the cornice that continues round the church; over these pilasters is an ornament of festoons. In the chapels, over the altars, are tabernacles, like those of the Pantheon, between two windows: the entrances to the chapels are rich in sculpture. The addition, entirely of marble, unites in front with the old part of the temple, but extends beyond the side walls. A basement is carried round, on which are placed in front four Composite marble columns, sustaining a projecting cornice, which is continued round the edifice. Between the columns spring three arches; that in the centre is the loftiest, but all have the impost of the same height; the lateral ones are enclosed with large marble slabs, and are carried down to the basement; the middle one touches the ground, and forms a square recess, in the centre of which is the gate of the temple, with its pediment; from the cornice of which hang large festoons and garlands of flowers in marble, which have a beautiful effect. The whole of the recess is ornamented with basso-relievos,

tablets, and rare marbles; and in the spaces which remain between the arches and the columns are incrustated porphyry, enriched with garlands in basso-relievo. The flank of this church is a species of arcade. In the arches are placed the windows, which are as many in number as there are chapels. Here are the sepulchres of many illustrious men; among them those of the Malatesta family, and of the beautiful Isota, celebrated for the number of her lovers. Here also is the portrait of Leon Battista. How this edifice was to be finished, it is impossible to decide, as there does not remain either model or design. From some medals it appears, that over the middle arch of the façade another was to have been formed, flanked with pilasters, to serve as a large window for the church. This was to have been crowned by a pediment, and each side was to have had pilasters, supporting two other half pediments, placed over the lateral arches below, as is seen in more than one of Palladio's façades. According to the medal, there was to have been a grand cupola; but it is difficult to imagine how this could be in unison with the building. It is supposed that the plan was to be a Latin cross, terminated by a semicircular choir. The building is majestic, and vies with the antique in solidity; the façade, with the large arches in the centre, has a triumphal appearance, very characteristic of a temple intended as a monument of the victories of Sigismondo, who had promised it in a vow to the Almighty. It is said that Alberti was commissioned by Nicolas V. to rebuild the Basilica Vaticana, and, as a proof that he possessed sufficient ability, he began the construction of a vast tribune at the head of the old basilica, and for this purpose demolished the ancient temple of Probus, which was in that situation. But it had scarcely been commenced, when the pope died, and no further advances were made in the undertaking.

Alberti always lived like a true nobleman, that is, liberal

and courteous to all, and the friend of virtue. He composed a number of works, on various subjects. He died in his own country, at a very advanced age; but the precise time is not known.

The taste of Alberti in the decoration of his orders is not the most exquisite, and gives evidence of the obscure times from whence he emerged. His Doric capital is almost Gothic, and his Corinthian is ill constructed, and only nine diameters in height; but the most remarkable thing is, that in this order the corona is omitted.

CRISTOBOLO

WAS employed by Mahomet II. to build a mosque at Constantinople, on the ruins of the church of the Holy Apostles, originally erected at the expense of Theodore, wife of Justinian; and produced an edifice which in magnificence nearly equalled St. Sophia; and afterwards eight schools and eight hospitals, dependent on this mosque. The sultan, as a reward, gave him the street which remains in the family of Cristobolo, and is inhabited by the Christians. It is difficult to believe that an architect should have the whole of a street awarded him for his talents; but it is well to know that the Turks do not always treat the Christians so barbarously as is represented. No Christian nation will suffer a mosque near them, yet the Turks admit of our churches and missionaries.

BERNARDO ROSILINI, A FLORENTINE,

WAS highly esteemed by pope Nicolas V., who employed him to make a square, and the church of St. Francesco at Fabriano; at Gualdo, the church of Benedetto; and in Assisi that of Francesco. This pope also employed him on many other edifices and fortifications, at Civita Vecchia, at Narni, at Corvietto, and at Spoleti, and to restore the bath at Viterbo, which had been in a ruinous state for some time. Afterwards, by commission of the same pontiff, Rosilini repaired a great part of the walls of Rome, furnished them with towers, and added much to the strength of the castle of St. Angelo. A great number of churches, and, above all, the basilica of Giovanni Laterano, of Paolo, of Lorenzo without the walls, &c. were restored and embellished by him. But his greatest work would have been in the suburbs, had the designs which he made, at the suggestions of Nicolas V., been carried into effect; a new temple of St. Peter's, which, in grandeur, magnificence, and richness, was to surpass any other building: three spacious streets were to lead to the temple, all under porticoes, with galleries above for the artificers, who were to be distributed and distinguished according to their classes. Finally, a palace sufficiently spacious for the pope, with all his court, the cardinals and their attendants, with other officers belonging to the church; superb apartments for the accommodation of the monarchs, emperors, and sovereigns, and their numerous retinues, who might visit Rome; villas, gardens, fountains; a grand theatre for coronations and other luxuries, were not forgotten to embellish this palace. But the pope died, and all these magnificent plans vanished like a dream.

BACCIO PINTELLI, A FLORENTINE,

BUILT at Rome, by order of pope Sixtus IV., the church and convent of Santa Maria del Popolo, and a palace in the old suburb for the cardinal Rovere,—an edifice then much esteemed. The Sistine chapel to the Vatican; the hospital of Santo Spirito, in Sassia; Ponte Sisto; the church of St. Pietro, in Vincola; and that of St. Sisto,—are all of his building. He also rebuilt at Assisi the church and convent of San Francesco.

BARTOLOMEO BRAMANTINO, A MILANESE,

FLOURISHED about the middle of the fifteenth century, and rendered himself equally celebrated both in painting and architecture. After having painted many subjects in Rome, by order of Nicolas V., he measured the antiquities of Lombardy, and composed a book on them.

He erected many buildings in Milan; among them the church of St. Satiro was much esteemed, richly ornamented within and without with columns and double corridors, with a sacristy full of statues, and a magnificent tribune. It is insisted by some, that Bramantino was one of the first to revive good architecture, and that from him Bramante learnt much,—not Bramante Lazzari of Urbino, but another of the name, at Milan, who at that time was considered a good architect.

GIOVANNI DEL POZZO,

A canon of the cathedral at Cuenca, the founder of the Dominican convent of St. Paul, near that city, about the middle of this century, and the architect of the celebrated bridge at the entrance of the convent. It is over the river Huexar, and so admirably constructed, that it appears a Roman work. It has five arches, the middle piers of which are 150 feet high, and look like towers; the bridge is 350 feet long. It is said to have cost 63,000 ducats,—a great sum at that period.

The bridge passes before the above-named convent. Don Antonio Ponz, who visited Spain, says, that he is surprised the canon Pozzo does not rise from his sepulchre and destroy the massive entrance, which may be termed one of the most ridiculous of modern works. The church is rich Gothic, and the work well executed. In the centre of the transept is the body of the founder, with his statue in a sitting posture, and an inscription, simply giving his name.

Pietro del Pozzo, a relation of this excellent man, built the convent of the Jesuits of Cuenca, now of the Interpreters, on a good plan; but the interior is spoilt by an excess of capricious ornament.

FRANCESCO DI GIORGIO, OF SIENNA,

(Born 1423, died 1470,)

OF the Martini family at Sienna, a clever sculptor and a delightful painter,—an intelligent engineer and judicious

architect. At Urbino, for the duke Frederigo Feltre, he built a famous palace, arranged with great judgment, both as to convenience and beauty. The staircases were more beautiful and convenient than any that had been constructed till that period. Bianchini, who gives a most tedious description of them, insists that the principal architect was one Luciano, born in Lauriano, a place in Scavonia, and sent by the king of Naples to Frederigo, duke of Urbino. Others attribute this edifice to Baccio Pintelli, and others again to Leon Battista Alberti. However, let who will have been the architect, it is a work of great solidity, and entirely of brick. The façade is extensive, but not elegant, and symmetry is not attended to in the large doors and windows. The principal courtyard is a rectangle, surrounded by a portico of columns, of travertine stone, each in one piece, of the Composite order, with an attic base. Over the capitals are round arches, which sustain an entablature; over this rises a second order of Corinthian pilasters, between which are windows, well arranged, and corresponding with the arches below. The edifice is terminated by a large entablature: in the thickness of the wall are two stories of apartments. The staircase is commodious and spacious; the principal hall, 110 feet long, 43 wide, and 50 high, covered with a skylight. All the rooms are in proportion, and arched. Francesco Giorgio made, besides, the designs and models which pope Pius II. required for the palace and bishopric of Corsignano, his country, by him declared a city, and, from his name, afterwards denominated Pienza. It is considered that legitimate architecture is much indebted to this architect.

FRANCESCO DI GIORGIO, OF SIENNA.

(From 1422, died 1470.)

Of the Medici family at Siena, a clever sculptor and a delightful painter — an intelligent engineer and judicious

FRANCESCO COLONNA

(Nisi utile est quod agimus stulta est gloria.)

NEITHER merits the title of an architect or a writer on the subject of architecture. It is true that he composed a large book, which (although compared by his commentator to that of Vitruvius) is too full of absurdities to be read with patience. As well might the term "architectural" be applied to the writings of Ariosto, Tasso, or any other work of fancy.

ARISTOTILE ALBERTI, A BOLOGNESE,

Is called in the Catalogue of Painters Ridolfo Fioraventi. In mechanics he was one of those rare geniuses who appear like prodigies in the course of many centuries, and astonish not only the vulgar but the most scientific. He is ranked with Detriano, Zabaglia, and Feracina.

In Bologna he removed the bell-tower, with all the bells, of Santa Maria del Tempio, called by the Bolognese La Maglione, to a place 35 feet distance. At Cento, in the church of Biagio, he set the bell-tower upright, which inclined 5 feet and a half. In Hungary he rebuilt the bridge over the Danube, and performed so many other wonders, that the king knighted him, and allowed him to coin money and stamp it with his own name. The great duke of Moscovy, John Basilide, on the fame of such astonishing efforts, sent for this great man, and commissioned him to build a number of churches.

CHAPTER II.

OF THE ARCHITECTS OF THE SIXTEENTH
CENTURY.

THE century we have just passed abounded in architects, that which we are about to describe still more so.

The Tuscans have great quickness of wit, activity, and perseverance; they have been particular in preserving memorials of whatever related to their history, though sometimes disposed to exaggeration. Florence has been considered in arts and science the Athens of the three last centuries; and Tuscany has been compared to a diamond, not of the first weight, but of the finest water. The grand dukes of the Medici family were each a Mecænas; and it is well known that such characters create men of ability. It is equally true, that learned men seldom want a Mecænas. These two descriptions of persons reciprocally produce each other. The common complaint is, that now we have no talent, as we have no longer the Cosmos and Leos; but this is the language of idleness and ignorance. Let any one prove that he possesses ability, and he will meet with a patron: but even supposing he should be oppressed with penury, as may sometimes happen, he will find some satisfaction in the consciousness of his own merit, and will be plenteously recompensed in the glory which the public will one day award him. It must be confessed, to the honour of letters and the fine arts, that rewards are not necessary to produce talent. The respect and esteem which they excite, has been the cause, especially in England, of the rise of so many illustrious characters. The progress of the mind is not retarded by

suppressing reward, but by bestowing it improperly; and an ignorant patron may do more harm than good. When Sixtus V. applauded Roselli for covering his pictures with ultramarine and gold, Perregino and other great painters were obliged to spoil their productions to please the fancy of this pope, who was destitute of any taste.

BRAMANTE D'URBINO.

(Born 1444, died 1514.)

BRAMANTE LAZZARI* was born in Castel Durante, or, according to some, at Fermignano, of a poor but honest family. He was from a child instructed in drawing and painting; but feeling a great inclination for architecture he travelled into Lombardy, and after having studied the cathedral of Milan, went to Rome, where he painted a number of subjects, which no longer exist, in the church of San Giovanni Laterano. All his attention was directed to the study, examination, and measurement, of the valuable remains of antiquity within and without the walls of Rome. He measured all that remains of the Villa Adriana at Tivoli, and afterwards went to Naples for the purpose of completing his studies. The cardinal Oliviero Caraffa, discovering his talent for architecture, ordered him to rebuild, for the fathers della Pace, at Rome, the cloister, which was of travertine, and executed by Bramante with extreme care: and although it had not any particular beauty in its design, it procured great credit to its author, Rome not then boasting of a superior architect.

* Vasari, tom. v. p. 137.

He served pope Alexander VI. in the quality of superintendant in the erection of the fountain of Trastevere, and that part of the piazza of St. Peter which was taken down some years ago. His reputation increasing, he erected a great part of the Palace della Cancellaria, and the church of St. Lorenzo and Damaso. He made the design for the palace in the piazza of San Giacomo Scosciacavalli, which now belongs to the counts Giraud. The gate has only been finished a few years; it is not after the grave and solid style of Bramante. All the aforesaid edifices are of travertine stone, but in a regular style, which shews that architecture was then improving, though not entirely purified from barbarism. It is thought that the palace of the duke di Sora was designed by him; if true, it is not much to his honour.

Bramante was much esteemed, of a quick intellect, and unequalled both in invention and execution. But we should not have known of his abilities without a Julius II., who was as capable of suggesting great things as Bramante of executing them. This pontiff was desirous of reducing to the form of a rectangular theatre the space between Belvedere and the old Vatican palace.

At the extremity of this court, which was 400 paces long, and between two small palaces of equal size, he placed a niche of such majestic proportions, that it appeared of consequence when seen from the opposite end; but half the court was not on a level with the rest: he levelled it, so as to render the access to the niche and palaces more commodious. Thus two-thirds of the court remained in the lower plain, and the rest a little above, forming a species of terrace, the ascent to which was by a double flight of winding steps, admirably constructed, with a beautiful niche, and fountains between the flights, and the walls adorned, in the manner of a theatre, with twenty columns of the Doric order. This diversity of arrangement, and the irregularity of the ground, con-

tributed to the beauty of the effect, by breaking the immense length of the court, which far exceeded its breadth. The porticoes round it were formed by pilasters of the Doric order, in imitation of the theatre of Marcellus, the only perfect monument of antiquity of this order remaining at Rome. Above is a second order, Ionic, with windows. At that part of the court which is contiguous to the Vatican palace, under the Borgian apartments, Bramante made a grand semicircular staircase, in the form of an amphitheatre, where a number of persons might stand to view the spectacles which were exhibited below.

Sixtus V., wishing afterwards to remove the library which Sixtus IV. had placed on the ground floor, built, across the before-mentioned court, and a few yards from the staircase, a large vaulted chamber, which is now the celebrated and incommodious Vatican library.

This destroyed what Bramante had contrived with so much ingenuity. Subsequent changes and alterations have reduced the court, originally the most magnificent in the world, to two smaller ones, and a garden totally unconnected with them, and shutting out the great niche, which is now only seen from the garden, where it appears disproportionate, from being too close to the eye. The engraving of the court, as left by Bramante, executed but indifferently by Enrico Van Schoel, is among the rich collection of prints in the library erected by the Corsini princes, and with true liberality maintained for the public benefit.

The celerity with which pope Julius II. wished his projects to be executed, was seconded by the activity of Bramante, who worked day and night at the Vatican. But this excessive haste caused all the walls to give way, and in some cases to be entirely rebuilt. During the pontificate of Benedict XIII. it was necessary to strengthen the pilasters of the court, when they were so enlarged that they now look disproportionate: the same thing

was done in several other places under Benedict XIV. The steps of the Amphitheatre afterwards becoming dangerous, they were entirely removed, and the ground levelled.

In the Belvedere, Bramante afterwards made some whimsical staircases, composed of the three principal orders of architecture. Julius II. rewarded this favourite architect with the office "*del piombo*," when Bramante made a very ingenious machine for stamping the bulls. He attended the pope to Bologna in 1504, when that city was incorporated with the pontifical states, and served as an engineer in the wars of Mirandola.

By command of the same pontiff, he made the Strada Giulia, for the purpose of placing there all the offices and halls of justice in Rome, and commenced a palace on the Tiber, near San Biagio, in rustic-work, which never was finished; there are now scarcely any remains of it.

The graceful and beautifully proportioned temple within the cloister of San Pietro Monterio, is one of the most esteemed works of this architect. It has, nevertheless, many defects: the door cuts two pilasters; the balustrade, which forms the upper gallery, is not strengthened by pedestals or acroteria, that at the base is equally slender with that at the top, which certainly should not be the case; the attic is too high; and, finally, the ornament at the summit of the dome is exceedingly heavy. Notwithstanding the narrowness of the space, two flights of steps, judiciously contrived, conduct to the subterraneous chapel.

According to the original design, this temple was to have been in an ample enclosure, surrounded by porticoes of isolated columns, and four entrances to four small chapels at the angles, and a niche between each chapel and entrance: a simple and picturesque idea.

Bramante also built the palace, which afterwards belonged to Raffaello d'Urbino, of brick, with columns cast in one piece, (an invention then new,) with bosses of rustic

work under the Doric order. This palace was beyond the Traspontina, and was taken down to build the colonnade of St. Peter's.

Whilst Francesco Maria della Rovere, duke d'Urbino, had the command of the Venetian armies, his consort, the duchess Eleonora Gongaza, commissioned Bramante to build a new imperial palace, on the side of a delightful hill, near the old one. Bramante made very strong foundations to support the arches on the declivity, which he ornamented with coffered, like those of the Pantheon and the Temple of Peace. Above these arches he raised a court, level with the state apartment, ornamented within by pilasters of a good-proportioned Doric. By three arches of the portico, formed of stone columns, you pass to a rectangular hall, terminated at the two extremities by semicircular tribunes, in which are the doors of two apartments. The above-mentioned doors are curious, the jambs in the width of the opening are disposed obliquely, so that those who are without cannot see those within. The ceilings of the rooms are in beautiful compartments, and the superior ones are ornamented with elegant stuccoes, now spoiled by the water falling from the open galleries which were round the palace, and subsequently covered by Clement IX. The hanging gardens were extremely magnificent; and the whole would have been worthy of Bramante, but it was not finished, in consequence of the death of Eleonora and the duke.

The designs of Bramante for palaces and churches, both in Rome and the states, were numerous, but his greatest work was the basilica of St. Peter. Julius II. conceived the grand idea of demolishing the old church and erecting a new one, whose equal should not be found in Rome or the world. Bramante made a number of designs; among them, one with two bell-towers and a façade in the centre, as is seen in the medals struck in honour of him, under Julius II. and Leo X., by the ingenious Corodasso. Bra-

mante had the glory of triumphing over all his competitors; and justly. The plan, although a Latin cross, was well divided, and of a vastness unequalled. The principal nave was well proportioned, with peristyles forming three naves. He so admired the Pantheon; that he conceived the idea of introducing it in his new building, and gave the same dimensions to his cupola and steps, as those of the above beautiful example. The general arrangement was also similar, being composed of eight masses, between each of which were two columns, forming three intercolumniations. He selected this design with his accustomed haste, demolished half the church, and in 1513 began the new one, which, before the death of the pope and the architect, was raised nearly to the cornice, with an expedition almost incredible. The arches were turned to the four great piers, and the principal chapel was erected opposite the entrance. On this occasion Bramante covered the arches with wood, which were sculptured like the frieze, and wreathed with a mixture of cement. Thus he renewed the use of stuccoes, as practised by the ancients, but the knowledge of which had been lost for some time. Without the walls of Todi he erected an isolated temple, internally incrustated with white stone, worked in the form of a Greek cross, and a beautiful cupola in the centre: it is said to be a model of St. Peter's. This latter structure, designed with so much anxiety, and began with such ardour, remained unfinished. The architects who succeeded him, as we shall see hereafter, made so many changes, that, except the four great arches over the tribune, nothing of his work remains. He died aged seventy, and was most pompously interred at St. Peter's, his remains being followed by all the papal court and professors of the fine arts.

Bramante was of a lively disposition, easy manners, and liberal, particularly towards men of talent, for whom he always entertained an affectionate regard. It was he who

conducted to Rome and encouraged the incóparable Raphael, and also taught him architecture.

In the school of Athens, Raffaello drew the portrait of his worthy master leaning against a pilaster, and appearing to describe with the compasses a geometrical figure, surrounded by youths, who are regarding him with great attention. Bramante always lived in a respectable and honourable manner. He delighted in poetry, and composed some sonnets, which, if not very superior, are at least agreeable, and without defects, as may be seen in the collection of *Opuscoli*, printed at Milan in 1756. He sometimes performed the part of an improvisatore, which he did with less difficulty than appears possible, and which Cicero calls *audax negotium et impudens*. For so many amiable qualities, both of the heart and mind, Bramante was esteemed while living, and his memory venerated when dead. His manner in architecture was at first cold and formal, but afterwards became elegant and majestic. He possessed genius and was fertile in invention, and gave to his buildings requisite solidity.

Michael Angelo much esteemed him, which he evinces in a familiar letter to his friend Messer Bartomeo:—
 “ It cannot be denied that Bramante is superior in architecture to all others, since the time of the ancients,” &c.

Venturi Vitoni of Pistoya was his disciple: he built, in his own country, the church dell' Umilita. It is an octagon, with a portico of the Corinthian order; the cupola was added by Vasari.

GIULIANO DI SANGALLO, A FLORENTINE,

(Born 1443, died 1517,)

WAS son of Francisco Giamberti, a respectable architect. Giuliano* and his brother Antonio were at first engravers and engineers, they afterwards devoted themselves to architecture. Giuliano began the cloister at Florence, which now belongs to an order of Carmelite monks, called Santa Maddellena de' Pazzi, of the Ionic order, copied from an ancient capital found near Florence: the volutes of this capital descend to the necking of the columns; and under the ovolo is a frieze a third of the diameter high. For Lorenzo de' Medici, surnamed the Magnificent, he built a palace at Poggio a Cajano, and made the vault of the great hall† of such a size, that it was considered a masterpiece, and was the largest then known.

He rebuilt the fortification of Ostia, the bishop of which was afterwards Julius II., and where Giuliano remained two years; the inhabitants are obliged to quit the neighbourhood, except during the winter months, on account of the malaria. It is the want of inhabitants which causes this malaria so to predominate in the neighbourhood of Rome, where superfluous water often remains stagnant, from the lands being uncultivated. He afterwards went to

* Vasari, tom. v. p. 207.

† This hall is 163 feet in length, 68 wide, and 65 high. It is built with a fine stone, decorated with columns and pilasters, of the Corinthian order, with niches, statues, and bas-reliefs. The statues, which decorate the walls, are from the hands of the most celebrated masters. The ceiling is flat, and divided into thirty-nine compartments, very richly ornamented; each contains a subject painted in oil by Vasari. The walls are decorated with fresco subjects of the triumphs of the Medici.

Naples to present a model to the king for some work near Castel Nuovo; with which the monarch was so much pleased, that he made Giuliano a rich present of horses, clothes, and other valuables; among them a silver cup, containing a hundred ducats. Giuliano, who was of a noble disposition, refused to accept them, excusing himself by saying, that he was in the service of Lorenzo de' Medici, who did not value riches. The king, surprised at his independence, insisted on his selecting whatever might please him, Giuliano then chose some fragments of antiquity,—a head of the emperor Hadrian, a naked female figure, and a sleeping Cupid,—which, on his return, he presented to Lorenzo de' Medici, who was well pleased with this testimony of the architect's disinterestedness, that he commissioned him to build, without the gate of San Gallo, at Florence, a large convent for the hermits of St. Agostino. He also executed many other works in that city, among which was the grand palace, called Poggio Imperiale. He was afterwards called to Milan, to build a superb palace for the duke, which he began; but the war breaking out prevented its completion.

He built the cupola of the church of the Madonna di Loretto in Rome, under Alexander VI.; he restored the soffite of Santa Maria Maggiore, said to have been gilt with the first gold brought from America; and adorned the national church dell' Anima, which was in the Gothic style, with a square façade of three orders of pilasters; for the cardinal Rovere he built the palace adjoining St. Pietro in Vincola, on the north side of the church; it is not very worthy of attention.

At Savona, the birth-place of the above cardinal, he made a design for another palace, considered extremely superb: but in consequence of the vicissitudes of that time, he sought refuge at Lyons, and presented a model of what he had designed to the king of France, who was

much pleased with it. The edifice was not completed till some time afterwards: it is now converted into the monastery of Santa Chiara. He also designed, for the duke Valentino, the castle of Montefiascane, of which there only remain some fragments of walls.

When Julius II. assumed the papacy, Giuliano was indignant at the pontiff, in whose service he had been so much employed, entrusting the rebuilding of St. Peter's to Bramante D'Urbino; he in consequence retired to Florence. He was afterwards recalled by the pope, returned to Rome, and followed him to the war; but not being employed in any considerable buildings, he again became disgusted, and withdrew himself. Pietro Soderini Gonfaloniere, of Florence, employed him, at the siege of Pisa, to build a very ingenious bridge, so constructed, that it protected the besieged from the fire of the enemy. He also planned the fortress of Pisa, and the gate of San Marco, of the Doric order. He went once more to Rome, by desire of Leo X., to superintend the building of St. Peter's, but his age and infirmities obliged him to relinquish the office, and he retired to his native country, where he was desirous of spending his last moments.*

* In addition to the buildings designed by this architect may be mentioned the palace Gondi, in the place called Santo Firenzo; it was commenced in 1490 for a rich merchant. The beautiful proportion of the façade, the elegance of its architecture, gives us a high idea of the qualifications of him who executed it. The interior court is well disposed, and has been highly ornamented; it is surrounded by a portico, and in the middle is a fountain. The staircase has a very rich balustrade, and the walls over the arches have some antique medallions.— See *Architecture Toscani, par A. Grandjean et A. Famin.*

ANTONIO DI SANGALLO,

(Died 1534,)

By order of Alexander VI. altered the tomb of Hadrian into its present form, when it took the name of the Castle of Sant' Angelo. He then constructed the castle at Civita Castellana, designed a fortress at Arezzo, and was appointed by the government of Florence superintendent of all the fortifications. At Monte Pulciano he erected a beautiful temple to the Madonna, and other churches at Monte Sansovino: but the infirmities of age not enabling him to endure the inconveniences to which his profession subjected him, he devoted himself entirely to agriculture.

These two brothers improved the Doric order: they were great lovers of antiquity, and had a fine collection of antiques. Architecture was almost hereditary in their family, as we shall see hereafter.

LEONARDO DA VINCI,

(Born 1443, died 1518,)

WAS born in the castle di Vinci,* near Florence, and united such a combination of talent as is seldom seen in one person. The beauty of his appearance, the agility of his

* Vasari, tom. v. p. 21.

body, his strength, so wonderful, that with one hand he broke a horse's chain,—were gifts of an ordinary kind, when compared with those of his mind. He gave many extraordinary proofs of his abilities as a painter, sculptor, anatomist, architect, geometrician, mechanic, poet, and musician; but was particularly distinguished in painting. He was the first who produced a style after nature, subjected the art to certain rules, and recovered it from that languor into which it had fallen during the barbarism of the preceding centuries. By order of Lodovico Sforza, duke of Milan, called the Moor, he conducted the waters of the Adda to Milan, and rendered the canal of Mortesana, near the valleys of Chiavenna and Valtellina, navigable over a space of 200 miles, surmounting innumerable difficulties, and making new drains to preserve the lands from frequent inundations. This is the only instance on record in which he acted as an architect: after completing it, he composed a treatise on the nature, weight, and motion of water, and made a great number of new machines. It was his custom to write on whatever he executed; which he is said to have done with his left hand, as all his works preserved in the Bibliotheca Ambrosiana, at Milan, are written from right to left, in the Hebrew manner, and are not legible without a magnifying glass. When Louis XII., king of France, was at Milan, he made a figure resembling a lion, which moved by internal machinery towards the king in the great hall of the palace; it then stopped on a sudden, and, with its claws opening its chest, shewed the arms of France on its heart.

After remaining some years at Milan, Leonardo returned to Florence, where he was, with Michael Angelo, selected to paint the saloon of the council. A noble emulation induced them to execute those famous cartoons, which are the admiration of all Italy, and, while they exist, will serve as studies to painters. He afterwards went to Rome, but the disgraceful jealousy which arose

between him and Michael Angelo, made him resolve to visit France, whither he was invited by Francis I. Leonardo having fallen ill at Fontainbleau, the king set out to see him. Overcome with this attention of majesty, he collected all his strength to raise himself; but at this moment he was taken with a mortal fainting, the king hastened to assist him, and he died in his arms.

Both in theory and practice, Leonardo may be considered as the father of painting. He has left a multiplicity of clever and interesting observations in his works, superior to whatever has been written since. He made the great perfection of his pictures to consist in representing objects as if he saw them in a glass or camera obscura.

SIMONE POLLAJUOLO, A FLORENTINE, CALLED IL CRONACA,

(Born 1454, died 1509.)

HE visited Rome at an early age;* and, being attached to architecture, devoted his time to measuring those noble remains, of which there were then a great number, and in excellent preservation: there are now but few, and those few, by time and a variety of accidents, are spoiled and disfigured.

Simone returned to his country, and from continually speaking on the ancient monuments of Rome, received his surname. Being reputed an excellent architect, he was employed by Strozzi to continue the building of his palace, which had been designed by Benedetto da Majano, who had left Florence at the time Il Cronaca arrived there.

* Vasari, tom. vi. p. 19.

He erected the façade in the Tuscan order, very beautiful, and at the top placed a Corinthian entablature, the most magnificent that has ever been seen. Il Cronaca designed it from an entablature at Spoglia di Christo at Rome, and increased its proportion for the purpose for which he employed it. In applications of this kind great judgment is requisite : Bramante, Michael Angelo, and Palladio's best works united, would produce absurdity ; as from many fine verses repeated indiscriminately from Homer, Virgil, Tasso, and Milton, might result something perfectly ridiculous. Il Cronaca afterwards adorned the court of this palace with a Composite order below and a Corinthian above, with columns, windows, and doors, extremely beautiful. The interior, however, did not correspond with the exterior ; not from the fault of Cronaca, who was obliged to accommodate himself to the taste begun by others. Benedetto da Majano is also excusable, being confined for want of space, the persons residing near not choosing to relinquish their houses.

Il Cronaca built the sacristy of Santo Spirito at Florence, of an octangular figure ; it is elegant and well proportioned. On the hill of San Miniato, without Florence, he built the church of St. Francesco, of such exquisite proportions, that Michael Angelo used to call it his beautiful *villanella*. He also erected the convent of the serving fathers,—an edifice much praised in its time, but of which little now remains by this architect, from its having been often increased and repaired.

He had also a great share in rebuilding the council-hall at Florence, one of the largest halls in Italy ; surpassing even those of the Vatican, of the Vicaria at Naples, of the ducal palaces at Milan, of Urbino, Padua, and Venice. After this work, which was very defective, being square without, and extremely dark, Il Cronaca was so infatuated as to join the party of the brother, Savonarola. He died in his own country, and was buried at Sant' Ambrogio.

ANDREA CONTUCCIO DA MONTE SANSOVINO,

(Born 1460, died 1529,)

WAS the son of a peasant* named Dominicho, and the same circumstance occurred to him as to Giotto. Whilst attending his flocks, when a child, he was discovered drawing on and modelling the clay. Simone Vespucci, then governor of that province, saw the inclination and talent of the youth, and, with the permission of his father, took him to Florence, for the purpose of educating him. Andrea became one of the first sculptors, as we may see by his statues, of which there are a great number at Florence, at Genoa, and other cities, and especially at Rome, in the two famous sepulchres, in the choir della Madonna, del Popolo, and in the group of Sant' Anna, Christ, and the Madonna in the church of Santo Agostino.

He was equally successful in architecture; his chapel del Sacramento, in the church of Santo Spirito at Florence, is an instance of it: although small, it is so beautifully constructed, that it appears cut out of one piece. The asylum of the sacristy of the same church is an edifice entirely of stone, with twelve Corinthian columns, supporting an architrave, frieze, and cornice, and a vault of stone, divided into compartments, well sculptured, which are not placed immediately over the centre of the columns. When Contuccio was reprehended for this fault, he replied that he had imitated the Pantheon: from such legitimate examples arise sometimes absurdities. The fame of this artist was so great, that the king of Portugal requested Lorenzo de' Medici to spare him. He built many edi-

* Vasari, tom. ix. p. 291.

fices in that country ; among others, a royal palace, with four towers. After having resided nine years in Portugal, he returned to Italy loaded with rich gifts, and was by pope Leo X. sent to Loretto, where he executed many beautiful sculptures, finished the palace of the canons began by Bramante, and fortified the city. Whilst employed at Loretto, in the four months of absence allowed him every year, he went to Monte Sansovino, his native place, where he built for himself a convenient house, and purchased some property. He passed the remainder of his life in tranquillity among his relations and friends. He ornamented the place of his nativity with a cloister for the monks of Santo Agostino, and a small chapel without the gate. He overheated himself in removing some palings in front of his villa, and died in consequence. He was prudent, just, and reasonable, provident, courteous in his manners, and a friend of learned men. He left some of his designs and writings on the proportions and measurements used by the ancients.

RAFFAELLO D'URBINO,

(Born 1483, died 1520,)

HAD for his father Giovanni Sanzio, a painter, of not much celebrity, but possessing talents in one of the most important affairs—the education of his children. His ancestors were painters ; and, were we here considering Raphael as a painter, we should say that in him Apelles lived again, and that we have since never had his equal ; but we are going to treat of him merely as an architect.

Raphael* was taken to Florence by Leo X. to build the façade of San Lorenzo. His design consisted of two orders, above which is an attic. The palace of the Ugocioni, now Pandolfini,† is of his architecture. This palace has two stories, the quoins of the building are rusticated, and the windows of each floor are decorated with columns, supporting entablatures, with triangular and circular pediments alternately. In Rome he erected the stables of Agostino Chigi, in the strada Lungara, near the Farnese palace. The first story has small double pilasters, with their pedestals distinct; they are of the Doric order, with an architrave of three faces, a plain frieze, and a cornice entire: the second floor has the same number of Corinthian pilasters, with their pedestals also divided. In consequence of so many breaks, the effect is destroyed, and the cornice on the first story appears to have no connexion with the rest: the door, having Doric columns and high pedestals, is also in bad taste. Near to Sant' Andrea della Valle he built the palace Caffarelli, now Stoppani; the façade has a rustic basement, which is beautiful. Over this is an order of double Doric columns, between which are the windows, each with its balustrade of stone. This order looks heavy, nor is the disposition of the columns happy, which, besides the inconvenience of being coupled, prevents the eye extending

* Vasari, tom. iii. p. 54.

† This palace is admirably disposed for its situation, which is at the angle of two streets, called San Gallo and Santa Salvestrina. The piece of ground on which it stands is very irregular in its shape, and presented some difficulties. The court and garden are decorated with fountains and antique statues. The façade is built of stone, with the exception of the principal cornice, which is of wood; the latter is very beautiful, and it is to be regretted that it is executed in so perishable a material. This work may be considered, perhaps, one of the best of this artist's designs in architecture.

from one window to the other. But Raphael was particularly fond of thus coupling the columns.

After the death of Bramante, Raphael was one of the architects of St. Peter's, for which he made a design. He divided a Latin cross into three naves, with a recessed chapel on each side. The lesser branches of the cross terminated in a semicircle, with a number of isolated columns and pilasters. These latter predominated every where. The cupola was at the intersections of the transept, and somewhat too distant from the façade, which had a triple portico of isolated columns, with unequal intercolumniations, and the portico was surrounded on three sides by a simple flight of steps: the idea wanted grandeur. He also designed the gardens of the Vatican palace. It is said that, for a considerable sum which Leo X. owed him, Raphael hoped to have been made a cardinal, and that in consequence of this hope he deferred his nuptials with the niece of the cardinal Bibiena. He died at the age of thirty-six, from inattention to the state of his health, on Good Friday, the anniversary of his nativity. It is impossible to imagine what he would have been as a painter, had he not died at so early an age. *Quantum ad gloriam longissimum ævum peregit.* After the most pompous obsequies, he was buried in the rotunda, where is his bust in marble, with a Latin inscription, and the famous distich of the cardinal Bembo:—

Hic est ille Raphael: timuit
 quo sospite vinci
 Rerum magna parens et mo-
 riente mori.

Which may be thus translated:—

“To the memory of Raphael. Nature feared to be conquered by him while living, and to be annihilated at his death.”

Softness, grace, and elegance, the characteristics of his pictures, were conspicuous in his own person. Courteous to all, and so liberal, that when he went to the pope, he was followed by more than fifty painters, who courted him as their monarch.

He endeavoured to imitate Michael Angelo; but not being able to equal him in naked figures, he soared into the boundless regions of painting; that is, he knew how to manage with precision and elegance all the beauties of the art, which are by authors entitled invention, composition, design, colouring, and expression. He treated these in a manner which would have been admired by all Greece. His skull is preserved in the academy of St. Luke, which the students visit, as if in the hope of being inspired with similar talents; and it is wonderful that, admiring him so much, the modern painters should so little resemble him. Either they do not really wish to imitate him, or do not know how to do so. Those who duly appreciate his merits have attempted it, and been successful. Mengs is an example of this observation.

BACCIO D'AGNOLO, A FLORENTINE,

(Born 1460, died 1543,)

WAS an excellent carver in wood; but being much attached to architecture, he went to Rome, to study it among the monuments of antiquity.* He, however, continued his business; and assembled at his house, particularly in the winter, the most able artists of that time, — Raphael, then a young man, Il Sansovino, Majano, Il Cronaca, Giulio,

* Vasari, tom. vii. p. 103.

Antonio Sangallo, and sometimes Michael Angelo, with other ingenious Florentines and strangers. Baccio erected a part of the great hall at Florence. At Gualfondo he designed a garden, now belonging to the marquess of Riccardi. In the piazza of the Santa Trinita he built a palace for Giovanni Bartolini,* and introduced a cornice, copied from one at Rome in the gardens of the constable Colonna, but which, with many other antiquities, is now destroyed. Baccio had not the judgment of Cronaca: he applied to this small palace so large a cornice, that it appeared like an immense hat on the head of a child. This was the first palace with windows ornamented by pediments, and columns to the doors, bearing an architrave, frieze, and cornice; a novelty which, like all others, was first blamed, and then passionately admired. All Florence ridiculed Baccio for this new style; not only personally, but with sonnets and epigrams reproaching him with building a chapel instead of a palace. Those who ridiculed the building did not understand the subject, nor the reason for placing pediments over the windows: perhaps Baccio could not sufficiently account for them himself. He built several other palaces, and gave the designs of the Villa Borghesini on the Poggio. The campanile of Santo Spirito, the most beautiful of the kind, and that of St. Majano, are also his designs. But the lantern of the cupola of Santa Maria del Fiore did not contribute much to his honour.

(1511-1512, 1513, and)

* This palace was built in 1520, and is opposite to the church of Santa Trinita. Its plan is very simple and well arranged; the whole height is divided into three stories, and of good proportion. He inscribed over the principal door the inscription, "Carpere promptius quàm imitari," as an answer to the revilers of his style. The motto, "Per non dormire," placed on the frieze over each of the windows, belongs to the arms of the family of Bartolini. The interior court has four loggias, one over the other: the stylobates of the first and second are decorated with arabesque ornaments. The architecture, both within and without, is tastefully decorated.

Notwithstanding the care of the Tuscans in preserving whatever belongs to them, Brunelleschi's design had been lost; Baccio made another, and had executed the eighth part of it, when Michael Angelo returned from Rome: he observed, that in executing this work, some of the masonry, intentionally left by Brunelleschi, must be cut away; and compared it to a cage, not because destitute of proportions, but because, when compared with the great cupola, it was small and insignificant. It appears that Baccio had not considered the general scale of the whole. Michael Angelo made a design for it; but, in consequence of the disputes which arose, the cardinal Giulio de' Medici remained undetermined, and the drum of the cupola without columns to surround it. Some attribute to him the palace Salviati at Rome, others to Nanni da Baccio Bigio. Be it by whom it may, the architecture of this great edifice is ugly and discordant, particularly the entablature.

Baccio died at the age of eighty-three. Giuliano his son, also a carver and architect, succeeded to the direction of his father's buildings. He erected at Montughi, without Florence, a small house for Francesco Campana, well ornamented, and judiciously arranged. But, in the model which he gave for the great altar and the choir of Santa Maria del Fiore, he shewed himself destitute of ability and invention.

Domenico, another son of Baccio, exhibited a genius for architecture; and, had he not died young, would perhaps have surpassed his father.

NOVELLA DA SAN LUCANO, A NEAPOLITAN,

STUDIED at Rome, and restored the church of San Domenico Maggiore at Naples, removing all the Gothic parts that he could. A fine opportunity presented itself of displaying his talent, 1470, in the palace of Roberto Sanseverino, prince of Salerno, and high admiral of the kingdom, who gave no other direction to the architect than to make the most sumptuous edifice that had ever been seen. In ten years the work was complete. It is of travertine stone, worked to resemble the points of a diamond, and was afterwards presented by D. Isabella Feltri della Rovere, princess of Bisiguono, to the Jesuits, who, under the direction of the father Pietro Provedo, a Jesuit, constructed the church of Il Gesu Nuovo, now Il Salvatore. The plan was a Greek cross, of a good form, with a magnificent cupola, which in 1688 was entirely destroyed. In less than seven months it was rebuilt: it is the richest church of Naples, but has too many ornaments, is not well executed, and has a façade like a prison. After the dispersion of the Jesuits and the wandering brothers, it became the property of the Zoccolante order, (wooden-shoe friars) to whom it still belongs, the cupola being dismantled.

GABRIELLO D'AGNOLO, A NEAPOLITAN,

A contemporary with Novello, built the church of San Giuseppe and that of Santa Maria Egiziaca, for which he acquired so much credit in Naples, that D. Ferdinando

Orsini, duke of Gravina, confided to him the construction of his palace in preference to San Severino. This edifice is rusticated throughout the whole of the ground floor, which serves as a basement to the upper story: the latter is ornamented with fluted Corinthian capitals, in the manner of Serlio. The whole mass is heavy, the pilasters are too far apart and ill proportioned, the windows badly decorated. It is nevertheless one of the best edifices in Naples. Another story has since been added, which does not harmonise with the rest. The great door has also been ornamented, and evinces a modern taste.

GIAN FRANCESCO MORMANDO, A FLORENTINE,

(Born 1455, died 1552,)

STUDIED architecture under the celebrated Leon Battista Alberti. After visiting the antiquities of Rome, he retired to Naples, and became the friend and competitor of the two preceding architects. The church of San Severino, one of the most conspicuous at Naples, is of his building. By this work he acquired so much fame, that Ferdinand sent for him to Spain, where he wished him to build a palace and a church; but his principal occupation was to sing and play on the lute; whence the monarch nominated him not only his first architect, but his first musician, and consequently rewarded him doubly.

On his return to Naples, he continued the church of San Severino, and made some additions to the monastery. In order to equal the two last-mentioned palaces of the dukes of Gravina and Salerno, the duke de Viestri ordered Mormando to erect one for him, now called Filomarini,

belonging to the princess della Rocca : an edifice which has suffered much in the various insurrections ; but there is sufficient remaining to shew the ponderous taste of the times. Mormando also designed the palace of Cantalupo, on the beautiful river Posilippo. He built many other edifices, among which is the small church della Stella, near San Severino, rebuilt, embellished, and endowed at his own expense.

SIGISMONDO DI GIOVANNI, A NEAPOLITAN,

Was a disciple of Mormando. He built Il Seggio di Nido, in which the piers have Gothic ornaments, and a cupola above well formed. This vault or cupola produced him so much repute, that he was entrusted with that of San Severino, according to the model made by Mormando. Such works were then new at Naples, and considered extremely difficult to execute.

ANTONIO FIORENTINO,

(Died 1570,)

Was born at Cava, near Naples ; he studied architecture at Rome, and establishing himself at Naples, built the church of Santa Caterina à Formello, with a cupola, which is considered, though without any apparent reason, to have been the first in that city.

BALDASSARE PERUZZI,

(Born 1481, died 1536,)

WAS born at Volterra,* where his father, Antonio Peruzzi, a noble Florentine, had retired during the civil wars of Florence. But Volterra being afterwards sacked, this illustrious family lost every thing, and fled to Sienna, where they lived in poverty. Baldassare devoted himself to painting, went to Rome, where he excelled in his knowledge of perspective. He afterwards applied himself to architecture, and erected many buildings in Rome. Removing to Bologna, he made two designs for the façade of San Petronio, one modern, the other Gothic, with many others extremely ingenious, in order to unite the old building with the new, without spoiling the former. He built the gate of the church of San Michele, in Bosco, and embellished the monastery of the monks di Monti Oliveto, without Bologna. He also made the design and model for the cathedral of Carpi, which was built under his direction, after the rules of Vitruvius. Being called to Sienna, he fortified that city; on his return to Rome he was employed by Leo X. in the building of St. Peter's, and this pope thinking that the idea of Bramante was too vast, Baldassare made a fresh model, both magnificent and ingenious. According to the account given of it by Serlio, it was to have been a Greek cross, terminated at the four extremities semicircularly. Between these extremities were four square sacristies, over which bell-towers might be erected. At each of the extremities was a semicircular porch, through which, by three openings, orna-

* Vasari, tom. vi. p. 101.

mented with four isolated columns, was the entrance to the temple. The great altar was in the centre, encompassed by four large piers, supporting a cupola 138 feet in diameter. This temple consisted of two naves, which cut each other at right angles; in the centre was the great cupola. Each nave had two side aisles, and where these intersected each other, were placed four cupolas, 48 feet in diameter. This design is conceived with so much judgment, that it merits an attentive consideration in Serlio, as every part of it served afterwards for a model to the succeeding architects. ||

The tomb of Adrian VI. in the church of dell' Anima, was built by Peruzzi. For Agostino Chigi, at Longara he erected that small palace which, coming into the possession of the Farnese family, has since been called La Farnesina. Peruzzi himself ornamented it externally with historical representations in terra cotta, which are now obliterated. The hall was decorated with columns, drawn in perspective, which made it appear much larger than it really was: but the most extraordinary thing is the loggia in the garden, in which this architect and painter represented the fable of Medusa; Perseus, and some other figures, are in the corbels of the roof: the ornaments drawn out in perspective are so natural and vivid, that the most learned in the art have taken them for relieve. Titian was so convinced of this, that he climbed up to touch them; although he himself painted Charles V. so naturally, that placing the likeness on a table, it is said his own son Philip II. spoke to it, really taking it for the emperor. Raphael, also, drew Leo X. so to the life, that a cardinal, imagining it to be really the pope, offered it the pen and ink to sign a bond. In this there is no exaggeration; the sublimity of painting, however, does not consist in such deceptions, which are only exercised by painters of ordinary works. The architecture of the above-named palace is well arranged, with regard to convenience, but the

small Doric pilasters, which are repeated in the second story, like those in the first, are formal. The frieze in the first story is without the usual ornament, and the cornice is almost entirely suppressed. The whole is beautiful.

For the representation of a comedy by the cardinal Bibiena, played before the pope, and the first composed in prose, Peruzzi painted two scenes, which have served as examples for whatever has since been done of that kind. He also directed the preparations for the coronation of Clement VIII. ⁴¹ In the dreadful sacking of Rome, in 1527, in which so many persons, unable to endure the insults offered them, killed themselves in despair, Peruzzi fell into the hands of the Spanish soldiers, who, from his noble and graceful aspect, taking him for a prelate of high rank, used him most barbarously, to make him discover some imagined treasure; but finding him at length to be a painter, they forced him to draw the likeness of Charles le Bourbon, and sent him away covered with wounds.

He fled to Porto Ercole, and from thence to Sienna, where he arrived perfectly naked, having been stripped on the road. He was well received by the citizens, executed many public and private works, and shewed his patriotism in refusing to obey the pope, who wished to employ him as an engineer at the siege of Florence.

On his return to Rome, he made many designs for palaces for the Orsini family, erected some buildings near Viterbo, others in Puglia, and continued his studies in mathematics, and on Vitruvius, to which he added some commentations, drawing the figures himself. The court of the palace of the dukes d' Altemps, in Rome, is commonly thought to have been built or restored by Peruzzi. The style is simple, but noble, and there are evidences of some intended alteration.

The most difficult and considerable work of this architect, is the massive palace near San Pantaleo; its form

is oval, and produces both a novel and beautiful effect. The façade is entirely of smooth stone-work, and has an ingenious and well-proportioned vestibule, with insulated Doric columns, sustaining an architrave. This architrave is continued through the portico over the small pilasters, opposite the columns. The middle intercolumniation answering to the door is the largest, the others are narrow; the columns are placed two and two, as are also the pilasters on each side the portico of the façade. The Doric order is plain, and the soffite within the portico highly ornamented, consequently, not uniform with the general simplicity of the order. The door is well proportioned, but has too many dentils and modillions; the portico is terminated by two large circular niches, which reach to the ground: the soffite of the vestibule is minutely ornamented, as are also those of the two porticoes in the court, which are opposite to each other. The Doric order of the court, has a cornice and architrave, the guttæ of which, are very exactly disposed. The door and windows of the first floor are in a good style. The confined and narrow situation of the edifice, only serves to shew the greater ability of the architect. He, however, did not see the completion of it; he died suddenly, it was said, by poison, administered to him by some one jealous of his superiority. Peruzzi was, from the hour of his birth, the child of misfortune. He was a learned and clever architect, and remarkably industrious, but his extreme modesty prevented his ever asking a reward for his labour; and though employed by some of the richest nobles, they had not the liberality to offer it to him. As architect of St. Peter's, he received two hundred and fifty crowns a year, and with this he had to support himself, a wife, and children. But however great an evil poverty may be, who would not desire to be the poor but excellent Peruzzi, rather than possess riches accompanied with ignorance and illiberality? When at the point of death, pope Paul

sent him 100 crowns, with many useless offers of assistance. He was buried in the Pantheon, by the side of Raphael, but there are no remains of his inscription. Artists of every denomination assisted at his obsequies.

After his death his reputation increased, especially when the building of St. Peter's was continued, in which Antonio Sangallo met with a number of difficulties.

ANTONIO SANGALLO,

(Died 1546.)

Was the son of a cooper* named Bartolomeo Picconi, of Mugello, in the Florentine state. In his childhood he learnt the business of a carpenter at Florence, but going to Rome, was there dazzled by the fame of his maternal uncles, Giuliano and Antonio Sangallo. He was by them instructed in architecture, and from the latter received the surname of Sangallo. He was also a disciple of Bramante. His first work was the church of the Madonna di Loretto, near Trajan's column. Externally it is square, with small Composite pilasters coupled, on a high plinth. Over this square building, as if raised on an upper basement; is a double cupola, with an octangular drum, rather too lofty. The interior is also of that form, and the cupola, which covers the whole building, is consequently the same. The form of the doors and windows is bad, and their ornaments heavy and useless. We must, however, acknowledge, for the honour of Sangallo, that the small cupola, which is in a most extraordinary style, is by Giacomo Del Duca, a Sicilian. He afterwards built the

* Vasari, tom. vii. p. 173.

small palace near the gate of Venice, which now belongs to the counts of Parma; it is well proportioned and arranged, and the windows ornamented with great simplicity, but the pedestals of the columns which flank the great door, and those in the court, are immoderately large. He erected the Pasquino palace di Santo Buono, and various other edifices within and without the walls of Rome.

His reputation increasing, he was appointed architect of St. Peter's, and to repair some rooms in the Vatican and Loggias, in the building of which Raphael had left open spaces, to please some persons who wished to insert small cabinets.

Pope Leo X., desiring to fortify Civita Vecchia, a number of designs were made by various engineers, but that of Sangallo was preferred. Whether it was ever carried into effect is uncertain.

The church of San Giovanni de' Fiorentini, having been very imprudently placed on the borders of the Tiber, in the Julian Way, by Giacomo Sansovino, Sangallo strengthened it on the side next the river, but at an expense sufficient to have built the whole edifice, and made a model for a new church, which was not executed. He restored the fortress of Montefiascone, now destroyed; and in the great island of the Lake Bolsena he constructed two small temples, one octangular without and circular within, the other square without and octangular within, with four niches at the side faces, of a beautiful order. He repaired the church of San Giacomo, belonging to the Spaniards, at Rome; erected the church of Monserrato in the same city; the façade of the bank of Santo Spirito; and rebuilt the court in front of the Loggia of the Vatican, which was afterwards altered by Julius III., for the purpose of removing the granite columns to his vineyard without the Porta del Popolo. Sangallo was sent by Clement VII., with Sanmicheli, to fortify Parma and

Placentia. On his return to Rome he enlarged the Vatican with the chambers for the public consistories, and many others. The great excellence of this architect consisted in solidity, the most important part of architecture, as is evident in all his buildings, particularly at Loretto, where the church of the Madonna, which was in danger of falling, was by him admirably repaired and embellished throughout, the proportions of the original being retained: a far more difficult work than the raising a building from the ground. After the taking of Rome, Clement VII. took refuge at Orvieto, where being a scarcity of water, Sangallo walled in a well with stone, 50 feet diameter, with two flights of spiral steps, one within the other. By these the descent to the bottom was so contrived that the beasts entered at one gate, descended, and were laden with the water; then, turning round, they passed by the other branch of steps a gate in an opposite direction. This convenient erection, conducted with so much ability, and lighted from top to bottom by windows in the staircases, was completed with extreme quickness. The covering of the well remained to be made, which was afterwards done by Paul III., but not according to the design of Sangallo. There is a similar one in the castle of Chambord, a pleasure-house of the king of France, and another at Turin.

Sangallo designed the fortress at Ancona, another at Florence, near to Porta à Prato, and fortified Castro, given by Paul III. to Pier Luigi Farnese, for whom he built a palace, and many beautiful and noble habitations for private persons, all of which are now destroyed. When the emperor Charles V. passed through Rome, after his victory over Tunis, Sangallo had the direction of all the festivals given in honour of the monarch. Before the palace of San Marco, in the square of Venice, he erected a triumphal arch of four Corinthian columns. The architraves, frieze, and cornice, projected over each column,

between which were two Victories, so that in every division were four Victories; in the whole eight, illustrative of the various actions of the emperor. In the pediment were two figures in relievo, representing emperors of the house of Austria. At the four angles were four prisoners, with a number of trophies, in relievo. This was a most superb work, both for the invention, the proportions, and the embellishments in painting and sculpture, but it was transitory, being of wood, silvered and gilt, and, when the festival ended, it was taken down perfect.

The indefatigable Sangallo built for the duke de Castro the fortress of Nepi, raised the streets of that city, and made a number of designs for houses and palaces for the citizens, raised a number of bastions at Rome, and erected the gate of Santo Spirito, a magnificent and solid work, resembling one of the masses of antiquity. Two hundred years have elapsed, and it still remains perfect.

He rebuilt almost the whole of the Vatican, which had become ruinous in many places, and particularly on the side of the Sistine chapel. He enlarged the hall in front of the chapel, and made for the two side lights the large windows, and adorned the vaulting with beautiful stuccoes. He also erected the Pauline chapel, an elegant building for the exactness of the proportions, and made a variety of ingenious staircases, leading from the chapel to St. Peter's.

The fortresses of Perugia and Ascoli were erected by him with incredible quickness. In the Julian street at Rome he built a noble palace for himself, which now belongs to the marquesses Sacchetti, and has been much enlarged. The windows of the first story are too massive, the mouldings confused, and the corbels too large and have too much projection.

But the grandest study of Sangallo was St. Peter's, for which he made designs quite different from those of Bramante. Labacco, his servant, made the model of wood,

which is now preserved in one of the rooms at Belvedere, behind the great niche; it cost 4184 crowns.

This model did not please Michael Angelo, who considered it broken into too many parts, and that the two bell-towers, the four mole tribunals, and the large cupola, with an infinity of small columns, would convey the idea of Gothic building rather than of the antique.

Sangallo enlarged the piers of St. Peter's, and filled the foundation with so much solid material, that if all this hidden mass were exposed to view, the strongest imagination would be astonished. The grand Farnese palace was begun by Sangallo, while Paul III. was cardinal; and when he became pope it was enlarged, and the façade carried up by this architect as far as the cornice. The pope wished this cornice to be the most beautiful that had ever been seen; and all the most able artists in Rome were employed to make designs.

The pope had all the designs shewn to him, and after having more particularly praised that of Michael Angelo, much to the displeasure of Sangallo, he desired to see one by Melighino. At such a proposal Sangallo could not restrain himself, and exclaimed in extreme resentment, that Melighino was a mere mountebank of an architect. The pope answered, with a courteous smile, "We wish Melighino to be really an architect, and will therefore take care to provide for him." Melighino was of Ferrara, and after having, as it is believed, served the pope a number of years in the quality of groom, was desirous of becoming an architect. He had the care of Belvedere, of the pontifical buildings, and was declared by the pope architect of St. Peter's, with the same stipend as Sangallo. It is such persons that corrupt the fine arts. The cornice was afterwards placed by Michael Angelo, who rebuilt the palace in another form, as will be seen in his life, excepting what had been done by Sangallo. Between the porticoes of the ground floor the latter made

two doors and four windows, after the style of those mentioned by Vitruvius, but they have a bad effect from the diminution of the architraves. The interior door is 7 feet high, and half that in width, which is small for so large an edifice. The windows of the second story, whether by Sangallo or not, are monstrous beyond description, both on account of having triangular pediments over round windows, and columns placed on corbels almost in the air.

Sangallo was sent by the pope to settle the disagreement between the inhabitants of Terni and Rieti, concerning their right to the lake of Marmora. He terminated the strife with extreme difficulty, dividing the lake between them. From cold and vexation, Sangallo was taken ill at Terni, and died. His body was carried to Rome, and, accompanied by all the professors, was deposited at St. Peter's, near the Sistine chapels; but his epitaph, placed there by his wife, Isabella Deta, is no longer visible.

Antonio Battista Gobbo, his brother, was also an excellent architect. He generally assisted in the buildings of Sangallo, made many marginal notes on Vitruvius, enriched the work with various well-drawn figures, and finally translated it. This translation is no longer in print, nor would it be useful on account of its obscure style.

FRA GIOCONDO, OF VERONA,

(Born 1435,)

WAS a Dominican friar,* extremely learned in philosophy and theology, and skilful in architecture. From his youth

* Vasari, tom. vii. pref. p. 21.

he studied with great attention the models of antiquity at Rome, an account of which he collected into one volume, and sent it as a present to Lorenzo the Magnificent, the patron of literature.

He remained some years with the emperor Maximilian. The bridge of stone at Verona requiring repairs, and the foundation of the middle pile having been several times injured, Giocondo suggested the means of strengthening and preserving it. He surrounded it with double piles, which he drove into the bed of the river, and prevented the water, which was extremely rapid, from washing away the earth below the foundation. By this means he effectually repaired the pier. A few years since it was carried away by a flood, together with the bridge.

He made many observations on the Commentaries of Cæsar, which are printed, and was the first who gave a design of the bridge constructed by that general over the Rhone, and illustrated the text, which till then had been but ill understood; he also corrected many errors and obscure passages in Vitruvius, but there is still much wanting to make that work perfectly clear. He amended Frontino on the Aqueducts, and published Giulio Ossequente, Aurelius Victor, and Cato "De Re Rusticâ."

Louis XII. sent for him into France, to execute a variety of works, among which the two bridges over the Seine, supporting shops, acquired Giocondo a great deal of reputation, together with the praises of Sannazaro, who wrote on him a distich, which is here given, merely to shew the follies which in those times were esteemed beauties:—

Jocundus geminum imposuit
tibi, Sequana, Pontem;
Hunc tu jure potes dicere
Pontificem.

The bridge of Notre Dame has five arches, each 54 feet span, and 40 high from the water. The four middle

piers are each 15 feet and a half thick, which, with regard to their span, is as 2 to 7. Their length, which determines the width of the bridge, is 82 feet, not including the triangular piers, which project 12 feet. The arches are 4 feet thick. The whole is of hard stone, and considered by Scamozzi to be the best-constructed work in Paris.

While Giocondo was at Paris, he discovered, in an old library, a manuscript, containing the greatest part of Pliny's letters, — a very important discovery for architecture: they were afterwards printed by Manutius. The public hall at Verona, and the fortifications at Treviso, are thought to be the work of Giocondo.

But the scene of this friar's greatest efforts was at Venice. This city was in danger of losing those natural important bulwarks, its Lagunes, which were continually covered by the overflowing of the Brenta. Opinions were offered by different architects, but that of Giocondo prevailed, and was executed; it consisted simply in turning half of the overflow towards Chioggia. Thus, in the course of time, a great part of the sea round Chioggia was converted into a fertile and habitable country, and the Lagunes of Venice remain. It is therefore with justice that Luigi Carnaro, the most distinguished chevalier of his time, called Giocondo the second founder of Venice, in which city many of his writings are preserved under the care of the magistrates, who superintend the canals.

There afterwards happened a great conflagration at Venice, which destroyed almost all the quarter of the Rialto. Giocondo made a noble design, not only for a magnificent bridge, but for the whole of the part burnt, with regular streets, squares surrounded with porticoes for the superior artificers, palaces, and temples. But the design of one Zanfrignino, or Scarpagnino, was preferred; which was a mere mass of buildings, without solidity, beauty, or symmetry. Giocondo, indignant at the rejec-

tion of his plan, withdrew from Venice, with a fixed determination never to see it again.

As the designs remained in the family Bragadini, the Rialto was built some time after, and, it is supposed, according to the design of Giocondo, but it was the work of one Jacopo, or Antonio da Ponte. Notwithstanding its great fame, it has no other value than that of being a mass of stone, formed into one large arch, 66 feet span, having on the ridge two rows of shops, of the worst architecture that can possibly be imagined. The third arch of the bridge at Verona, which leads to the castle, is the largest in Italy, and is 142 Veronese feet span.

Giocondo retired to Rome, where he was declared architect of St. Peter's, after the death of Bramante. In conjunction with Raphael and Antonio Sangallo, he rebuilt that immense fabric which Bramante, from his great haste, left, with many other works, extremely weak. These architects had large square pits dug under the foundations, at a convenient distance from each other, which were filled in with a wall, built with great care; between these and some new piers strong arches were turned over the earth: thus the whole fabric, which was till then unsafe, was placed on a solid and new foundation. Giocondo repaired the stone bridge at Verona, which had been injured by the overflowing of the Adige.

He first surrounded the pier with piles below, so that the current could not undermine it: he then built an arch, which extended over the two middle ones. Thus the street which is over the bridge, is no longer supported by the two arches, nor by the lower pier, but by the upper arch, which covers the two middle ones. The more to relieve the pier, he left an ample passage for the water to pass off easily. Hence, although there are five arches to this bridge, four only support the weight above.

Giocondo lived an exemplary life, beloved by cotemporaries in literature, as Calderino, his countryman, San-

nazaro, Budeo, Aldus Manutius, the master of Julius Cæsar Scaligero. He died at an advanced age, but it is not known at what period, nor where.

PIETRO LOMBARDO, A VENETIAN,

AN architect and sculptor, who, in 1482, by order of Bernardo Bembo, then governor of Ravenna, a town under the dominion of Venice, sculptured the burial-place of Dante, in the form of a chapel, near the church of San Francesco. He also built at Venice the church of St. John and St. Paul, of a quadrangular form, with an elevated chapel at the extremity, the ascent to which is by sixteen steps, ornamented with a balustrade. The whole interior is rich in marbles and sculpture. The exterior is of two orders, the first Corinthian, the second Ionic, divided into arches, supporting a rich entablature, over which is a circular pediment, also ornamented. This composition is in the Greek style, which was then just renewed. The clock-tower in the square of San Marco does him great honour. A vaulted portico, supported by Corinthian columns and pilasters, appears majestically to rise from the piazza: then follow three stories, ornamented with Corinthian pilasters, each having a cornice. In the first is the dial-plate, in the second a tabernacle, with a Madonna in metal, in the last a large lion in marble; at the top is a terrace and the bell, on which the hours are struck by two bronze giants. The edifice is enriched with marbles, mosaics, and gilding. Columns are also introduced, but it is difficult to imagine their use. He built and sculptured the sepulchre of the cardinal Gianebattista Zeno, in San Marco, assisted by his sons,

Tullio and Giolio Antonio. He rebuilt, after a very convenient plan, the warehouse of the Germans, which had been destroyed by fire; he designed the church of Santa Maria Mater Domini, with one nave and a transept; the school of the Misericordia, the cloister of Santa Giustina at Padua, and many other edifices, assisted by his sons, who were equally competent with himself.

MARTINO LOMBARDO, A VENETIAN,

Was probably of the family of the preceding architect. His most considerable work is the school or Confraternita di San Marco, consisting of two ample halls: one on the ground floor, distributed into three naves, by two files of Corinthian columns; the other in the basement, with a chapel at the end, which is divided from the hall by three intercolumniations. These halls are well arranged; the façade is of various marbles, with mouldings in good taste. It is possible that the church of San Zaccaria is by him. The façade has two orders, with a curved pediment. It is much in the style of the preceding edifice.

Moro Lombardo, architect of the church of San Giovanni Grisostomo, is supposed to be his son.

BARTOLOMEO BUONO, OF BERGAMO,

(Died 1529,)

AN architect and sculptor of merit.* He built the church of San Rocca at Venice, 1495, in a very simple style, with Corinthian pilasters. It was restored with the same simplicity by Giovanni Scalfuratio, a celebrated architect, who died in 1764. The statue of San Rocca, within this church, is by Maestro Buono, and also the three small ones of the great altar in the church of San Geminiano.

The greatest work of Buono was the old building of the Procurazie, divided into three orders: the first is a porch of fifty arches towards the piazza of San Marco, which reaches from the clock-tower to the angle of San Geminiano, where, with five other arches, it turns in an easterly direction, and rests on the above-named church; the second and third stories are a double series of smaller arches, with windows, two of which correspond to each arch of the inferior portico, with fluted Corinthian columns supporting the arches. The upper part of the building is majestic; it has circular windows in the frieze, and over the cornice a series of elegant vases. This edifice projects too much over the superb piazza. We shall speak hereafter of the new Procurazie.

In 1510 Buono built the room which contains the bells in the tower of San Marco, which had been several times injured by lightning, placing above the cornice an attic, and finally a pinnacle at the top. This tower has two conductors, one within the other; the external one being six feet distance from the internal, which is the diameter of the staircases within.

* Vasari, tom. i. p. 248.

TULLIO AND ANTONIO LOMBARDO,

SONS of the before-named Pietro, were sculptors and architects. The bas-reliefs in the chapel del Santo, in Padua, are beautiful works by these artists. Tullio built the church della Madonna Grande at Treviso, three chapels in the church of San Paolo, and the chapel del Sacramento in the cathedral. In Venice he built the church of San Salvatore on a very singular plan, that is, a patriarchal cross with three transepts, one long one at the extremity, and two smaller ones below it. These three transepts are formed by three grand arches, which are carried up to the roof. Within these arches are placed other smaller ones on each side, which form four chapels. The principal pilasters which support the roof are Corinthian, with pedestals and cornices, and at the sides are lesser Ionic columns, which decorate the chapels. This work is much admired for its unity and elegant appearance.

SANTE LOMBARDO,

(Born 1504, died 1560.)

NEPHEW of the last architects, and son of their brother Giulio, built at Venice the façade and steps of the school of San Rocca. The latter have two distinct branches, which lead to an ample landing, from whence the ascent is by another branch, separated from the two first, and illuminated by a cupola: the width of this superior branch is nearly equal to that of the two first together, the

approach to which is decorated by columns supporting arches;—a beautiful idea, and well executed. The façade has two orders of fluted Corinthian columns and pilasters, not diminished by a profusion of ornaments and marbles: it is much admired. The palace Vendramini is, however, much more worthy of notice, not for its three orders of Corinthian columns, but for a well-proportioned whole, and a superb entablature, which cannot yield to the most admired of the kind. It is thought, also, that the Trevisani palace at Santa Maria Formosa, and that of Gradenigo, were by this architect.

GUGLIELMO BERGAMASCO.

AMONG the works of this architect, the Capella Emiliana de' Camaldolesi, at Murano, is much admired. It is a species of hexagonal temple, 20 feet in diameter, with three altars and three doors alternately. That side against which is the great altar, and that of the principal entrance, are much larger than the others. The Composite columns between the arches are on pedestals, with a good entablature. Although hexagonal, this edifice is covered with a double round cupola, and is attached to the great church on one side; the other sides are adorned with doors, niches, statues, and columns. Between the church of the Fathers and this temple is a pentagonal vestibule, of unequal sides, with twisted Ionic columns supporting a small round cupola.

Guglielmo also built the public palace of the Camerlinghi at the foot of the Rialto, the Tacca palace in Portogruaro at Friuli; and to him is also ascribed the grand gate, called the Portello of Padua, and that of San Tommaso at Treviso.

GIOVANNI MARIA FALCONETTO, OF VERONA,

(Born 1458, died 1534.)

WAS a good painter, as was also his father, and many of his ancestors.* He applied himself to architecture, and drew all the antiquities of his illustrious country. For this purpose he went to Rome, where he remained twelve years, excavating in various places, in order to discover the plans of the ancient edifices, which he measured and delineated. He also copied the antique sculptures of Rome, those of the surrounding neighbourhood, as well as those of the kingdom of Naples. He was much respected by the emperor Maximilian, then master of Verona, where Falconetto performed many excellent works. After many misfortunes, he retired to Padoua, and was received by the cardinal Bembo and by Luigi Cornaro, where he was celebrated for the sobriety of his life, and the urbanity of his manners. This senator thinking himself highly gifted, and being well versed in architecture, built a palace from his own design near Santo, in Padoua. Falconetto erected a loggia in front of the court, beautifully ornamented, which is considered a masterpiece, consisting of two stories of five arches, the first Doric, the second Ionic. In the same city he built a Doric gate to the palace of the governor, the gates of San Giovanni and Savonarola, the church of the Madonna della Grazie for the Dominican fathers, and an edifice for music and other diversions, small but light, and called by Serlio the Rotonda di Padoua. It appears that it gave Palladio the idea for the beautiful country house called by the same name, belong-

* Vasari, tom. vii. p. 82.

ing to the counts Capra. Falconetto began a superb palace in the castle Usopo, at Friuli, for Savorgnano, but, in consequence of the governor's death, it was never finished. He went to Pola, to study the ancient monuments, and was the first who drew the theatre and amphitheatre. Falconetto was fond of the magnificent; he made a number of designs and models for grand edifices, which were never required to be executed, and refused to erect many common buildings for private persons. The journey to Rome was so familiar to him, that happening to have a dispute with an architect about the admeasurement of some entablature, he suddenly set off to Rome to decide it. He was extremely fond of studying Vitruvius, and was the first to introduce a good taste in architecture in the Venetian states. He is also said to have invented many things which were afterwards ascribed to Buonarotti. He made designs for a mausoleum for the family of Cornaro, where he died. The prince had for him the affection of a brother, esteeming him for his great knowledge in architecture, and valuing his society on account of his facetious manner and smartness of repartee. He had him buried in his own sepulchre.

PIETRO COECH,

(Died 1551,)

WAS born at Alost, a city of the Low Countries, and went to Italy to perfect himself in drawing. He returned an architect, sculptor, and engraver. He executed many works in his own country, which acquired him wealth and fame. His desire of knowledge led him to Turkey, where he made a series of drawings, representing particular cere-

monies of the nations he had seen. The emperor Charles V. nominated him his painter and architect. He has left many treatises on geometry, architecture, and perspective.

GIROLAMO GENGA, OF URBINO,

(Born 1476, died 1551.)

WAS first intended for a clothier;* but having been discovered several times drawing secretly with a pen, Nature, jealous of her rights, led him to painting, whose votary he would never have been, had he followed the intention of his father: he, however, became great in that art, as well as in architecture. For the duke d'Urbino he built a palace on the imperial mount near Pesaro, so well furnished with colonnades, rooms, courts, galleries, fountains, and delightful gardens, that all the princes who travelled that road went to see it, and among them pope Paul III., on his way to Bologna. At Pesaro he restored the court of the palace, and built the church of San Giovanni Battista, which is the most beautiful in that part of the country. He gave a design for the convent of the Franciscans of Monte Baroccio, and for the bishop's palace of Sinigala. He was afterwards sent for to Mantua, where, after having repaired and embellished the episcopal palace, he erected the façade to the cathedral, of such graceful proportions and composition, that it is considered one of the finest specimens of architecture.

Genga was also a sculptor, well acquainted with music, judicious in argument, graceful in demeanour, and cour-

* Vasari, tom. viii. p. 223.

teous and affectionate to his relations and friends. From him is descended the honourable and distinguished Genghi family.

BARTOLOMEO GENGA, OF URBINO.

(Born 1518, died 1558.)

His masters were his father Girolamo, Vasari, Ammanati, and, above all, the antiquities of Rome, which he studied with great attention. For the duke d'Urbino he built a beautiful palace at Pesaro, and made an ingenious design for the gate of that city, which, from various accidents, was never executed. He also built the church of San Pietro at Mondavio, which, for so small a thing, is unequalled. He understood fortifications, and might have been employed by the king of Bohemia and the Genovese, but the duke d'Urbino would not allow him to leave. However, through the entreaties of a Capuchin, who pointed out that religion was to be benefited, the duke granted him to the knights of Malta, two of whom had been sent expressly to Urbino by the grand master, who was about to fortify the island, and reduce several villages into two cities. These two knights having remained at Urbino two months, soliciting the duke, at length succeeded by means of the Capuchin; and Bartolomeo was received at Malta with every demonstration of joy, where, like another Archimedes, he began to put his ideas into execution; but, after having made a model of a city, some churches, and a palace for the grand master, all designed with great regularity and in a beautiful style, he died,—in consequence of endeavouring to relieve himself from the extreme heat by receiving the air between two doors,—at the age

of forty. Nothing could exceed the grief of the knights; the duke d'Urbino wept, and considered it a duty to take care of the children of the deservedly esteemed Genga. He invented a number of curious masks, and was particularly clever in his arrangements for theatrical scenery. He wrote many agreeable sonnets in eight stanzas.

MICHELE SANMICHELI, A VERONESE.

(Born 1484, died 1559.)

HE learnt the elements of architecture from Giovanni, his father,* and Bartolomeo, his uncle, both good architects. At sixteen years of age he was sent to study the antique at Rome, which he did with so much discernment and attention, that he became one of the most illustrious architects of which Italy can boast. His first works were the cathedral of Monte Fiascone, of an octangular figure, beautifully proportioned, with a graceful cupola, covering the whole of the church; the famous temple of San Domenico in Orvieto, and a number of beautiful small palaces in both cities. Sanmicheli having acquired a great reputation, was sent by Clement VII., in company with Antonio Sangallo, to visit the fortifications of the ecclesiastical states. Having executed this commission, he revisited his own country, and then, from motives of curiosity, and a desire to gain instruction, he set out to observe the fortifications of the Venetian dominions. While at Padoua he was taken by the governor as a spy, but, having proved his innocence, he was immediately set at

* Vasari, tom. viii. p. 243.

liberty; and being discovered to be a man of great abilities, he was entreated to remain in the service of the republic. He, however, excused himself, that he could not do so lawfully, being in the service of the pope, but that he would shortly comply with the wish of the republic. In fact, by means of his own entreaties, joined to those of the Venetians, he obtained leave to quit the pontiff, to employ himself for the benefit and ornament of his own country.

To Sanmicheli is owing the glory of inventing the military architecture now in use. The northern powers claim the merit as theirs. Pagan, Blondel, Vauban, Scheiter, have had the credit of being the inventors of the present system of fortification, and Sanmicheli, who really was such, is unknown even to the Italians themselves. Before him all the bastions were round or square. He introduced a new one, inventing the triangular bastion, or, as some call it, pentangular, with plain fosses, flanks, and square bases, which doubled the support; and he not only flanked the curtain, but all the foss of the next bastion, cleared the ditch, and covered and paved the street. The mystery of this art consists in defending every part of the enclosure by a flank; therefore making the bastion round or square, the front of it, that is, the space which remains in the triangle, is undefended; and that is precisely what Sanmicheli effected. Vauban, and many other foreigners, have since modified his inventions.

This clever man made five or six bastions at Verona in this new triangular manner, which have remained more than 200 years. The first he erected at Verona was in 1527, and called delle Madalena, and in this the departure from the old manner and the commencement of the new is evident, the art being as it were in its infancy: in the subsequent ones, Sanmicheli, instructed by his own works, shews his gradual progress to perfection. With this new system he fortified Legnago, Orzi-nuovo, and Cas-

tello. These works received the approbation of all those acquainted with the subject, and particularly of the duke d'Urbino, captain-general of the Venetian troops. His fame became so great, that Francesco Sforza, duke of Milan, asked for his services repeatedly of the Venetians, who at length granted him for three months only. That sovereign was so satisfied with the designs and advice of Sanmicheli, that he loaded him with honours and rich gifts. On this occasion Sanmicheli went to Casale de Monferrato, to see that strong city and its castle, erected by Matteo Sanmicheli, his cousin, an illustrious architect, who also made the noble marble sepulchre in the church of San Francesco, of the same city.

He afterwards visited all the fortifications of the Venetian states, restoring and improving them every where. He left his nephew, Giran Girolomo, to execute his designs at Zara, in Dalmatia, who, after having fortified that city, erected from the foundations the wonderful fortress of San Niccolo, on the mouth of the port of Sebenico. Michele did a great deal at Corfu; and as the war with the Turks was then raging, he fortified Cyprus, Candia, Canaan, Retimo, and Napoli di Romania. From history we learn with what skill the fortifications were erected, which gave the Turks so much trouble. He afterwards planned two bastions at Padoua, and also fortified Brescia, Peschiera, and La Chiusa. So famous were all his works for solidity, that not a stone has moved. His most stupendous work was the fortress of Lido, by the Venetians called Lio, at the entrance of the port of Venice. It appeared impossible that in so marshy a situation, and so exposed to the flux and reflux of the sea, so large a mass could be laid with a hope of security. He, however, planned it with such solidity, using proper materials, and such hard Istrian stone, that it seemed to defy the effect of the waves: it appears cut out of one mass, and resembles a rock,

so large are the stones, and so well united. Externally it is entirely of rustic work. Within it was to have had a beautiful square, which was never perfected, and afterwards (as frequently happens to the works of great men) the idea was changed by those who presumed to know better. The voice of malice and envy then whispered that the heavy artillery required for the defence of the place would, on the firing, destroy the whole building. Sanmicheli, in consequence, requested that the largest cannons might be brought from the arsenal, and being placed both above and below, might be fired off at the same moment. The apprehension of a general destruction was so great, that many ladies withdrew from Venice; a terrible firing took place; the fortress was like a volcano; and the fear that had been excited was converted into joy, when not the least sign even of a fissure was perceived. The architect built also Murano, and was, with his nephew, Giovanni Girolamo, requested to serve the emperor Charles V. and Francis I. king of France, but they both refused, preferring to serve their own country.

At Venice Michele made a model for the monastery of San Biagio Catoldo, which is much admired; the magnificent and rich palace of the Cornari at San Paolo, and the grand Grimani palace near San Luca, on the great canal. In this he gives singular proofs of his great ingenuity and inventive faculties, and various resources for covering the defects and irregularities of the soil. The cornices of this edifice are objected to, as being too wide and too projecting; but it should be remembered that it was finished by various architects, who altered the design in many parts.

At Castel Franco, between Padoua and Treviso, he erected the famous Palazzo Soranzo, the most elegant and commodious villa that it is possible to imagine. At Padoua, in the church del Santo, he built, for Alessandro Contarini, a tomb in a new style, and more like an altar or chapel

than a sepulchre, but solid in its composition and ornamented with suitable figures. No city was more embellished by Sanmicheli than Verona, his native place. The gates are particularly beautiful. Vauban, with other moderns, teaches, that the gates should be situated in the centre of the curtain between two bastions, so as to serve both for a gate and cavalier. Long before this theory, the architect in question had illustrated it by practice. He built the Porta Nuova, a square edifice, supported within by a number of piers of stone, with enclosures or rooms for the guards, places for artillery, portcullis, and other material for defence. The proportion of the whole is correct, and the two ends are of the Doric order. The whole is solid and strong, suitable to the purpose of the building, and totally devoid of all fanciful light ornaments. The work is rusticated, except to the middle gate and the architectural parts. The exterior façade is supported by a wall, with two large pyramidal pilasters of marble, which rise from the bottom of the ditch; at the top are two round inclosures, approaching almost to towers. In the interior to the two gates, near the angles, are two corresponding long passages vaulted, which lead to a number of subterraneous galleries and rooms. There are two ingenious stairs within the angles, covered with a hard stone. Where the inclined stones at the extremity are joined together, they are raised up so as to prevent any water from settling. There is another roof above, for the greater convenience of the soldiers and their ammunition, supported by large pilasters, covered with a parapet. Till then there had never been a gate so magnificent, or so judiciously arranged, nor does it seem possible that posterity can ever have one to surpass it. Some time after this Sanmicheli built the Porta del Pallio, more wonderful than the preceding. The two parapets are of marble, and decorated with a noble Doric order. Externally are immense columns, projecting two thirds, fluted according

to the order, and of one block. These columns are placed two and two; four extend to the middle of the gate, and the other finish the façade of the edifice, which is extensive and much decorated.

The opening of the gate is square, which has a new and pleasing effect: but from the print in Maffei's "Verona Illustrata," it appears that the base, which runs round the edifice, does not much improve it. Above is a rich Doric entablature, over which was to have been placed an attic, to serve as a parapet for the artillery; this gate being also used as a cavalier. Before this work was finished the architect died, and his design was not well followed up. Within are ample rooms and other conveniences, for the soldiers. On the city side there is another gallery, which, in the interior, is rusticated with large pilasters, and on the exterior Doric columns half projecting, also of a rustic work, and without bases. At the top is a sculptured Doric entablature, which continues throughout the gallery, both internally and externally. Sforza Pallavicini, governor-general of the Venetian armies, was so delighted with this edifice, that he considered it impossible to find one equally superb in Europe. Sanmicheli also built the gate of San Zenone, solid, magnificent, and well arranged. It is square, with plain Doric columns, divided into squares of rustic work. This gate, although very beautiful, is quite eclipsed by the other.

Besides these military erections, Verona can boast of many specimens of civil architecture by Sanmicheli. The Guareschi chapel in San Bernardino, is a small round Corinthian temple, divided into four compartments by three altars and the door, and with four niches, proper for statues. The altars, pedestals, pediments, cornices, and the arches themselves, are all circular on the plan. The light is admitted by four apertures, each decorated by two columns. Of the eight columns, four have flutes in the regular manner, and the others are spiral; all are left

plain to about a third from the ground, that they might be less injured. The sculptures are beautiful, and the native stone of Verona is shewn in great perfection; it is white, smooth, and durable, and called *bronzina*, because, when working, it sounds like bronze. This beautiful chapel was not finished by Sanmicheli, whose other engagements obliged him to relinquish it to one unequal to the task; he had, therefore, the mortification to see it spoiled, and ardently desired riches, that he might be enabled to purchase it of the proprietor, and finish it according to his own ideas. He gave a design for the façade of Santa Maria d'Orgagno, for the monks of Monte Olivetto, which was beautiful, and in the Corinthian order; it was not commenced till after his death, and still remains unfinished. At San Georgio, Sanmicheli found means so to strengthen the side of the building, that he was enabled to place a cupola on it, which no one else had yet dared to attempt. In the noble temple of the Madonna di Compagna, circular and peripteral, that is, surrounded by columns externally, forming a portico all round, he was much hindered in the execution, and still more so in his excellent design of the Lazaretto, from the contemptible motive of lessening the expense. He also gave a beautiful design for the bell-tower of the cathedral, but through the interference of the vicar-general, it was executed by one who was any thing but an architect. This person made the stairs in the principal wall, and before the building had reached the level of the bells it separated into four parts, as had been predicted. Bernardino Brugnoli, son of a sister of Sanmicheli, rebuilt it, and also San Georgio, after the design given by his uncle.

There are in Verona five palaces by Sanmicheli. The Canossa is well arranged, with regard to its interior convenience. The first story, which is rustic, is rather too high; it has circular windows, with mezzanines above, and an entablature: the second story has Corinthian

pilasters, two and two; each couple being on the same pedestal, except at the angles, where they are not double; and from each of the pilasters projects a half one. The windows of this story are also circular, with a mezzanine above. This palace has been much altered latterly, and defaced by altering the proportions established by the original architect, an ill-proportioned balustrade being placed on the entablature, which produces a miserable effect. It is to be lamented that Verona should be so disgraced by the number of expensive and tasteless edifices daily erecting.

The façade of the Bevilacqua palace is beautifully ornamented. The first story is a rusticated Doric, with a proper entablature, on which is a continued balustrade. The second story has Corinthian orders on high pedestals: some of the columns have straight flutes, others twisted. All the windows are circular; and those at the upper part are alternately large and small, with pediments, some round and some triangular, over which are the square windows of the mezzanine. With the cornice much liberty has been taken. The learned do not attribute it to Sanmicheli; it differs too much from his style, both in character and proportion. The palace of Gran Guardia, on the Brà, which was only partly finished by Sanmicheli, or after his school, shews an excessive taste, and a perfect style of architecture.

The door of the Pellegrini palace is much admired, but whether deservedly is to be determined. It is rather high, probably made so, to render the entrance light. But the entresols between the two stories, the windows of which are in width double their height, appear to crush the pediments of the larger ones below, and certainly detract much from the elegance of the effect.

The first story of the Verzi palace is rusticated, as are also its entrances. The second story has Doric pilasters, between which are circular-headed windows, with pedi-

ments, which look oppressed by the windows of the entrecols. The Pompeii palace is a much better design; the first story is rusticated, without a cornice between it and the second, which has fluted Doric columns: at the angles, these columns are flanked by pilasters. The windows have circular heads, and are too large and too numerous; they have neither pediment, cornice, nor other useless deformities; an elegant balustrade runs through the first story. In short, this palace is considered the best among the five just described. It is to be observed, that Sanmicheli was unfortunate in most of his works: many were, from various causes, not finished by him, and he had the mortification of seeing some completely spoiled, either from interested motives, want of skill, or taste. Others, which remained imperfect at his death, were not better treated—a fate which has too commonly attended the works of the best architects.

The gates of the palace for the administration of justice, and that of the principal magistrate, are also by Sanmicheli. The latter, with Ionic columns, is too low; the fault, it is said, of Giovanni Delfino, then governor, who, not knowing any thing of architecture, obliged the architect to adopt his fancies.

Whilst Sanmicheli was quietly settled in his own country, assiduously applying himself to his profession, and revered by all for his singular worth, he received the melancholy news of the death of his beloved pupil and nephew, Giovanni Girolamo, son of Paolo Sanmicheli. He died at the age of forty-four, not without suspicion of being murdered at Famagosta, in the island of Cyprus, where he served the republic in the quality of military architect. His uncle died suddenly a few days afterwards of grief, and was buried in the church of San Tommaso, the design for which he made, but it was only followed in the upper part.

The morals of Sanmicheli were irreproachable; he was

cheerful but not gay, courteous, liberal to all, and exemplary in the exercise of his religion; never undertaking any thing of consequence without first hearing mass. By means of Giorgio Vasari, he sent fifty crowns of gold to a lady at Montefiascone, then in distress about marrying her daughter, of whom Michele supposed himself the father. This lady confessed to Vasari that the girl was not the child of Michele; she was, however, obliged to receive the money, which to one in such poverty was very acceptable. The Venetian Republic was desirous of making some pecuniary remuneration to Sanmicheli, but he was too liberal and noble-minded to accept it, and requested that his excellent nephews might receive it in his stead. For such great and singular qualities he was esteemed, not only by his fellow-citizens and the Venetians, but by the most distinguished personages in Europe, not excepting many sovereigns; and, what was still more valuable to him, by all the professors of the arts, more particularly by Michael Angelo, who held him in perfect veneration. None of his writings have appeared before the public. There are two of his treatises preserved in Venice by the commissioners of Canals, one on the method of confining the port of Malamocco, to give it a depth, which has since been accomplished; and the other concerning the rising of the Limena, which he considers equal in antiquity with the Brenta.

The genius of Sanmicheli in architecture was sublime. Solidity and convenience, unity, harmony, and simplicity, are conspicuous in all his works. With regard to the use of the orders, he was, perhaps, incorrect. His Tuscan architrave and capital are composed of so many members, that they resemble the Doric. The flutes of his Doric columns are too small for the solidity of that order. To the Corinthian he invariably gave modillions and dentils. He also attached his columns in the walls, and placed them on pedestals, higher than those of Vignola, that is, more than

a third of the height of the order. Finally, to the Doric he put immense pedestals, with a profusion of ornaments, from whence has resulted a door, more than two squares high, so proportioned that the line of the cornice should meet that of the impost.

Luigi Brugnoli married a sister of the before-mentioned Giovanni Girolamo Sanmicheli. He was a skilful architect, as were also his two sons. The elder of these, Bernardino, acquired great reputation from his execution of the bell-tower of the cathedral, and also that of San Giorgio; within the latter church he erected the great altar, of the Composite order, attached to the wall, and which, together with the pediment, follows the form of the niche. To the excellent architecture of this altar is added the beauty of the sculpture, which merits an attentive examination.

MICHAEL ANGELO BUONARROTI, A FLORENTINE,

(Born 1474, died 1564.)

WAS born in the castle of Caprese,* in the district of Arezzo, where his father, Ludovico di Leonardo Buonarroti Simoni, was commissary, or governor. The noble Buonarroti family of Florence was descended from the counts of Canossa. His mother was Francesca, daughter of Neri di Miniato del Sera, and of Maria Bonda Rucellai. When a child, Michael Angelo was taught the Latin grammar, but instead of attending to this tedious study, he secretly devoted himself to drawing; for which he was

* Vasari, tom. x. This author lived on terms of intimacy with Michael Angelo, and wrote his life, whilst he was then living, from which much of the present article is taken.

repréhended and beaten. At length, seeing it useless to thwart his inclination, his father, overcoming the common prejudice that painting was not the proper study for a nobleman, resolved to give him up to the care of Dominico and David Grillandai, with the agreement, that he should remain with them three years, and receive in that time twenty-four florins. The youth soon surpassed all his companions, and even his master. One of the former having copied some female figures drawn by Dominico Grillandai, Michael Angelo took the paper, and with a thicker pen retraced the subject with some fresh lines, exactly as it ought to have been. Grillandai was astonished at such a decided evidence of talent, and from this and several other circumstances, became convinced that his pupil knew more of his subject than himself, having observed that he could copy works, even of the best masters, which fell into his hands.

Lorenzo de' Medici resolving to form a school of sculpture, of which Florence was much in want, Grillandai selected Michael Angelo from the rest of his pupils to send thither. Finding an antique faun, wrinkled, old, and laughing, the nose of which was injured, he undertook to imitate it, and, though he had previously never touched a chisel, succeeded so wonderfully, that Lorenzo was perfectly astonished, especially as Michael Angelo had, in the spirit of whim, widened his mouth, shewing the tongue and teeth. Lorenzo observed to him, — "But you should recollect that old people generally lose some of their teeth." Michael Angelo immediately struck out one, and pierced the gum so naturally, that it appeared as if it had just fallen out. Lorenzo was still more surprised and delighted; he took the youth to his own house, assigned him an apartment in it, treated him as his son, and at table placed him above his own children. Michael Angelo was then between sixteen and seventeen years of age; and in order to assist his father, who was

not possessed of much fortune, his patron allowed him five ducats a month, which were equal to fifteen now; besides which his father was presented with a situation in the Customs. Whilst with this illustrious Mæcenas, by the advice of Poliziano, a learned man, and an inhabitant of the Medici palace, he executed a bas-relief in marble, representing the battle of Hercules with the Centaurs. The figures are a palm high, and although not possessing a claim to perfection, they have much more the appearance of a master's hand than that of a youth. He also sculptured a Madonna, in bas-relief, about one foot nine inches in height. These are now in the Buonarroti gallery, arranged by Michael Angelo the younger, in the time of Cosmo II., at the expense of 20,000 scudi.

The great abilities of Michael Angelo, and the fame he consequently acquired, drew on him the envy of many, among whom one Torrigiano gave him so violent a blow on the nose, that the mark remained ever after. He made a Hercules in marble, 7 feet 6 inches high, which remained many years in the Strozzi palace at Florence; it was afterwards taken to France. To Lorenzo the Magnificent succeeded his son Pietro, in every respect the reverse of his father. During one winter, in which there had been a heavy fall of snow, he employed Michael Angelo in the ridiculous work of making statues in that transitory material.

When the Medici family were banished from Florence, 1500, Michael Angelo fled to Venice. He remained a year at Bologna, and made an angel and San Petronius for the arch of San Dominico; and these are the best sculptures on that monument. On his return to Florence, he sculptured the famous Cupid, of which so many various accounts have been given. One is, that Michael Angelo having broken off one arm of his figure, buried it in a place likely to be excavated: when discovered, it was sold to the Cardinal San Giorgio Raffaello Riario, as a

statue of the rarest antiquity, Michael Angelo immediately produced the other arm, to shew how erroneous was the prejudice in favour of the antique. Others say, that this Cupid passed from the duke Valentino into the possession of the duchess of Mantua, who had really an antique, and that, by the advice of Michael Angelo, she shewed first the modern and then the antique; and that every one, on seeing the second, repented of having so much praised the first, the modern appearing little better than a deformity to their eyes when compared with the ancient. Others maintain that the duchess had only one valuable Cupid, which was that by Michael Angelo, and which is still said to be at Venice. It is also said, that the same cardinal, San Giorgio, sent a gentleman to Florence to ascertain if Michael Angelo were really the sculptor of this Cupid; and upon his requiring some proof of his ability, the artist not having any thing finished, took a pen and drew a hand, in a very masterly manner, a print of which is in the Corsini library, engraven by count Caylus. This cardinal, who was attached to, though but very little acquainted with, the fine arts, sent for him to Rome, and kept him in his own house for a year, without giving him an opportunity to display his talents. To be a real patron of the arts it is not sufficient to admire them, knowledge and discrimination are requisite. For a barber of this cardinal's, who fancied himself a painter, Michael Angelo drew a large picture of San Francesco, who received the five wounds. This picture is at Rome, in the church of San Pietro Montorio.

Michael Angelo executed for Giacomo Galli, a noble Roman, and a great admirer of his talents, a Cupid in marble, and afterwards a Bacchus, 10 palms high, with a cup in the right hand, and in the left a tiger's skin, with a bunch of grapes, which a Satyr is endeavouring to eat. This Bacchus is represented intoxicated and reeling, the stomach projecting, the back bent, the head inclined

forwards, and a little on one side. This wonderful and beautiful statue is now in the gallery at Florence; as the hand which holds the cup was accidentally injured, by Michael Angelo himself, some have supposed that to this Bacchus belongs the story attributed to the Cupid. When he executed this statue he was only twenty-four years of age.

For the cardinal Roano, of Amboise, he made the beautiful group of Pieta, in St. Peter's, at the altar of the Crucifixion, where it is badly placed, being too high and wanting light. Of this celebrated work there is a copy in marble, made by Nanni di Baccio Bigio, in the church dell' Anima, another of bronze, in Sant' Andrea della Valle, and another of marble at Florence, in the church of Santo Spirito. One day, when Michael Angelo was in St. Peter's, he saw some Lombards admiring this group, and heard one inquire of the other, "By whom was this done?" The latter answered, "By our Gobbo, of Milan." This Gobbo was Cristoforo Salari, a sculptor of much merit. Michael Angelo remained silent, but at night he shut himself in the church, and cut his name on the girdle, which surrounded the waist of the Madonna. Some critics have considered the latter figure too young, and it certainly is so. From the Cupid, the delicate Bacchus, and the elegant limbs of this Pieta, we may see how inconsistent is the judgment of those who have characterised Michael Angelo as only capable of executing strong, robust, and herculean figures.

He was sent for to Florence, to work on a block of marble, intended for a giant, which had been begun a hundred years before by Simon di Fiesole, who, not knowing how to manage the hands, left the mass unfinished. Michael Angelo made a David of it, of such an immense size that the tallest man could not reach the knees. In this he has far surpassed the Greeks, who did not acquire much excellence in their large statues. The Gonfaloniere Soderini,

thought the nose of this figure too large. Michael Angelo got upon the bridge of it with a chisel, and his hand full of marble dust, which he threw down with a piece of stone, pretending to lessen the nose, and after having remained there some time he descended, and inquired of the Gonfaloniere how it appeared now. "Oh! now it is to the life," replied the learned Soderini. This statue was placed before the gate of the old palace in 1504, where there is still some ancient sculpture of Maestro Simone, left there by Michael Angelo: there is one shoulder which is not quite perfect, for want of a sufficiency of marble. Michael Angelo received for the above work 400 crowns. There are those who say, that neither ancient nor modern times can boast such a colossal statue as this; not even Monte Cavallo.

For Angelo Doni, a Florentine, Michael Angelo painted a round picture, representing the Madonna kneeling, with the infant in her arms, presenting it to St. Joseph; in the distance are many naked figures, some reclining, some standing, and some sitting. This is a finished work, highly coloured, and is now in good preservation in the gallery at Florence. When Michael Angelo sent this picture to his friend Doni, he also sent a letter, demanding for his work seventy ducats. Doni thought the sum too much, and only sent forty. Michael Angelo immediately returned the money, with a message that he would either have 100 ducats or the picture. Doni, who was enchanted with it, sent the first seventy, which Michael Angelo returned, intimating that now he would have 140 ducats, which Doni was obliged to pay. For the honour of Michael Angelo, it is to be wished that this story is untrue.

When Leonardo da Vinci was painting the great hall of Florence, the Gonfaloniere, Pietro Soderini, wished Michael Angelo to do a part of it also. Michael Angelo chose for his subject the War of Pisa, and introduced a number of

naked figures bathing in the Arno; when the alarm is sounded they hasten out of the water, arm themselves in confusion, and fight in the best manner they are able. Among them, an old man is endeavouring to put on his stockings, but his legs being wet he cannot draw them on: the muscles and nerves, from the head to the feet, evince the feeling that agitates him. This picture has served as a study to some of the most celebrated painters, Aristotile da San Gallo, Raffaello, Andrea del Sarto, Sansovino, Perin del Vaga, and many others. It was in a great hall of the Medici palace, but during the illness of the duke Giuliano was cut into a number of pieces, as Baccio Bandinelli says, and dispersed into various places as relics.

Michael Angelo, at this time nearly twenty-nine years of age, and renowned for so many great works, was sent for to Rome by Julius II., who wished to erect a superb mausoleum for himself. Michael Angelo made a design, which, for beauty, grandeur, and quantity of statues, surpassed every ancient monument. This mass, 34 feet long and 22 feet wide, was to be insulated, in order that it might be seen on all sides. It had within and without an order of niches, intermixed with termini, clothed from the middle upwards, supporting the first cornice on their heads; and each, in some strange and whimsical attitude, is holding a naked prisoner bound, whose feet rest on a projection of the basement. These latter figures represent the provinces subject to, or united with, the pontifical dominions. There were also a number of other statues, as the Virtues and ingenious Arts, under the dominion of Death, with the pontiff who had cherished them. Over the angles of the first cornice were four large statues, Active and Contemplative Life, St. Paul and Moses. As the work ascended, it diminished above the cornice, with an historical frieze of bronze, and other small figures, with

a variety of ornaments. At the top were two statues; one the Heavens, supporting a bier on the shoulders, and smiling, because the soul of the pope had entered into glory; the other Cybele, goddess of the earth, also supporting the bier, but grieving at the loss of so great a pontiff. The entrance was at one extremity, in the centre of the niches; and the interior, where there was space to move with great ease, was in the form of an oval temple; in the centre of which was to be placed the sarcophagus, containing the body of the pope. This mausoleum contained forty statues of marble, besides the smaller ones, the sculptured bronze, and the ornaments. It is a vulgar error, and destitute of any probability, that in order to receive this wonderful sepulchre, pope Julius formed the idea of the new St. Peter's. It is true that great things are often derived from smaller ones, but in this instance it was otherwise. Michael Angelo immediately made preparations for this great work; he went himself to Carrara to choose the marbles, which, when they arrived at Rome, filled half the square of St. Peter's. He erected his workshop between Castello and the Vatican, with a draw-bridge to the gallery, for the convenience of the pope, who frequently went to see him work. He sent some marble to Florence, intending to work there during the summer, to avoid the extreme heat of Rome. For this sepulchre, which he never finished, Michael Angelo made two slaves, and afterwards presented them to Strozzi, in gratitude for his attention to him during a long illness, which he had at the Strozzi palace. They are now at Paris, in the house of Richelieu; one is almost complete, the other but roughly sketched; they are both larger than life, and in a most masterly style. One Victory is finished, and now in the Old Palace at Florence, but the captive under the right knee is only sketched out. The Moses is finished, and now in San Pietro in Vincola;

it is most beautiful, but would be seen to more advantage if placed higher and insulated, as it was intended to have been.

While Michael Angelo was thus employed, the rest of the marbles arrived from Carrara, to pay for which he went to the pope, but finding him occupied on other affairs, he defrayed the expense himself, thinking he should soon be reimbursed. He returned another day to speak to the pope on the subject, but a groom denied him entrance. Indignant at this conduct, he gave vent to a violence of feeling, from which even great men are not exempt, and said to the groom, "When his holiness calls for me, tell him I am gone elsewhere." He ordered his servants to sell his clothes to the Jews, took post immediately, and fled to Tuscany. When arrived at Poggibonzi, on the Florentine frontier, he was overtaken by five couriers, with most pressing letters from the pope, desiring him to return immediately to Rome. He was with great difficulty persuaded to give any answer: at length yielding to the entreaties of the couriers, he returned one, but it was a decided negative. Other motives have been attributed to this flight of Buonarroti; some ascribing it to the fear of the pope's resentment for having thrown down a plank from the scaffold, when painting the Sistine chapel, at the moment the pontiff had gone in secretly to look at him. Be this as it may, on his arrival at Florence three pontifical edicts were directed to that republic, extremely honourable to him; but rather than return to Rome, he resolved to go to Constantinople, where, through some Franciscan friars, he had been invited by the grand signior to build a bridge from Constantinople to Pera. However, the Gonfaloniere, Soderini, induced him to attend to the commands of the pope. He spoke to him thus:—"You have tried the pope in a way that the king of France would not have done, and it is now no longer time to be entreated. We cannot make war on him, and put the state in danger.

Prepare then to return, and if you are afraid, the signiory send you with the title of their ambassador: thus you will be safe."

Michael Angelo departed, and was recommended by the Gonfaloniere to cardinal Soderini, his brother, who was to introduce him to the pope, then at Bologna. On his arrival there, he was surrounded by the domestics, each of whom was anxious for the honour of accompanying him to the pontiff. The cardinal Soderini, who was then indisposed, sent a bishop, a friend of his, to him. Michael Angelo threw himself at the feet of his holiness, who said, in a grave tone, "Instead of your coming to seek us, we are obliged to seek you;"—meaning that Florence was nearer to Bologna than Rome. Michael Angelo, more by gestures than by words, made his excuses and asked pardon. The bishop, who introduced him, said, in order to soften the pope, "That such men were ignorant, and out of their professions were generally coarse and uncourteous." On this the pope flew into a passion with the bishop, exclaiming, "It is you that are ignorant for so libelling him: go to the devil with you;" and some say that he would have beaten him. Being at length calmed, he blessed Michael Angelo, and ordered him to make his statue in bronze, which, when finished, was placed in the façade of the church of San Petronio, amid the ringing of all the bells at Bologna, and other demonstrations of joy: it had so threatening an aspect, that the pope asked whether it was giving the blessing or the curse. Michael Angelo answered, that it was admonishing the people of Bologna to be more obedient for the future. The sculptor asked the pope, if he might put a book in the left hand: "No!" was the reply; "I know nothing of letters, rather put a sword." It is true that he always carried one. This statue was destroyed by the partisans of the Bentivogli faction, in 1511, and the duke of Ferrara made a piece of artillery of the bronze, and called

it Julius. He saved only the head, which he would not have parted with for its weight in gold, though equal to 600 pounds. We do not know in whose possession it now is.

The pope returned to Rome, leaving Michael Angelo at Bologna to finish the above-named work. At this time Bramante took the opportunity of withdrawing the favour of the pope from him, by endeavouring to persuade his holiness that erecting his tomb was a bad omen, and anticipating his death; that it would be better to desist from it, and employ Michael Angelo in painting the Sistine chapel, in memory of Sixtus IV., his uncle. Bramante thought that Michael Angelo, unaccustomed to the use of the pencil, would not succeed, and consequently lose the favour of the pope. In fact, on the arrival of Michael Angelo at Rome, he was ordered to undertake the work; he at first refused, but was at length obliged to submit. Bramante was commanded to make the scaffold for the painter, and supported it by cords fastened to the roof. When Michael Angelo saw it, he asked how the holes, made by the cords, were to be covered when the scaffold was removed. Bramante replied, that he would think of that hereafter, but that he could not do it in any other way. Michael Angelo then discovered that Bramante was either unacquainted with mechanics, or not his friend. He therefore went to the pope, and in the presence of Bramante himself, said that the scaffold was not properly erected. The pope allowed him to erect one in his own way, which he did without injuring the walls, and with so much ingenuity, that it served as a model for Bramante himself in building St. Peter's. Michael Angelo designed the cartoons of the paintings on the roof, and by the decision of Giuliano Sangallo, received 15,000 ducats for them.

Michael Angelo sent to Florence for some of the best painters to assist him, and teach him the manner of painting in fresco; but on trying their skill he was so dissatis-

fied, that he put out all their work, sent them away, and shut himself up in the chapel, determined that no one should enter it, nor would he, during the whole of the time he was engaged, see any one even in his own house ; but in proportion as he concealed himself, was the curiosity of the public excited. The pope especially was so anxious, that he went in one day, on which occasion, as it is said, happened the fall of the board, and the flight of Michael Angelo. When the third of his labours was completed, he discovered that in places exposed to the north, the painting had become mouldy. Overwhelmed with vexation, he determined to relinquish it, but Giuliano Sangallo explained to him that the defect proceeded from the peculiarity of the Roman cement, which did not dry quickly, and that, while wet, the salt would exude, but, when perfectly dry, the mould would no longer be visible. Thus encouraged, Michael Angelo continued the work, and when the half was finished, the pope insisted on seeing it ; and, although the chapel was filled with dust from the removal of the scaffolding, he was the first to enter : thither he was followed by all Rome, and all were equally astonished. Raffaello thanked God for living in the time of Michael Angelo, from whom he had learnt more than from his father, or his master Perugino. Bramante, being inclined to favour his countryman and relation, was desirous that Raffaello should finish the other half of the chapel. At this Michael Angelo was perfectly furious, and pointed out to the pope many defects in Bramante, not only with regard to his architecture, but in his moral conduct. The pope, who loved and esteemed Michael Angelo, would not allow him to be so unjustly used.

While Michael Angelo pursued the work, the pope inquired of him many times when he should have it finished. He answered, at length, When he should have satisfied himself on the subject of the arts. But perceiving that

this answer displeased the pope, he soon removed the scaffold; and on the morning of All Saints, the pontiff, to his great delight, performed the service in the chapel to an immense concourse of people. Michael Angelo wished to have retouched and embellished some parts, but was prevented on account of having to re-erect the scaffold. Who could suppose that such a stupendous work was finished in twenty months; particularly as Michael Angelo did every thing by himself, even to the preparing the ground for painting on, grinding the colours, and making every necessary tool. This was his custom also in sculpture, always making his instruments himself. It is said that the pope observed, that the painting appeared to him rather poor in colouring and gold; when Michael Angelo answered, that the men of the other world were not rich, and even contemned riches.

From working for such a length of time with his head upwards, Michael Angelo contracted such a defect in his sight, that, for many months, he could neither see nor read unless in that position; and whoever wishes to look at it attentively must feel the same inconvenience. It has consequently neither been studied nor copied. The smoke of the torches and candles blackens the colouring. It would be better to paint on perpendicular walls, and leave the vaulting and soffite merely to represent the heavens, in which might be seen clouds, stars, the moon, the sun, or birds, but never men, quadrupeds, fish, or plants; and although angels, saints, and fabulous deities, are rightly placed there, still the inconvenience of looking at them should be a sufficient motive for abolishing the practice.

The painting of the Sistine roof, according to the judgment of some, is the noon-day of the arts, dissipating the darkness which had so long encircled the horizon of the art.

Whether we consider the beauty of the figures, the

rotundity of the outline, or the graceful and easy proportions, we are equally delighted.

The naked figures, in which the perfection of the art is discovered, are of various ages, countenances, and attitudes. Some support festoons of oak leaves and acorns; the arms of Julius II., denoting his to have been the golden age. The compartments have six corbels on each side, and one in the centre of each extremity. In these corbels are sybils and prophets, 11 feet high; in the spaces between them are the generations of Jesus Christ, and in the centre of the ceiling is the creation of the world to the deluge, and the intoxication of Noah. But superior to all is the figure of Adam, half on one surface and half on another; but in consequence of the perspective, it appears to be painted on the same plane. It is a profile, one arm of the cross is inwards, one outwards, and it looks detached from the wall. This is the more to be admired, as there were not then so many rules of perspective. There are also many females, habited in various and whimsical costumes, which sufficiently shew that Buonarroti knew how to arrange the draperies with grace and elegance, although he had a greater proportion of naked figures, evincing the superiority of his drawing, and his perfect knowledge of the play of the muscles.

The universal applause that Michael Angelo acquired by this work made him more esteemed by the pope, who loaded him with rewards and honours; however he could not obtain permission to go to Florence, to erect San Giovanni, being obliged to resume his work at the mausoleum. Julius II. died, and to him succeeded Leo X., a great lover of the fine arts; and Michael Angelo, much to his dissatisfaction, was under the necessity of leaving the last-mentioned work to go to Florence, by order of the pontiff, to erect the façade of San Lorenzo. The most celebrated artists were competitors for this undertaking—Baccio d'Agnolo, Antonio Sangallo, Andrea and Jacopo Sansovino,

and Raphael; the design of Michael Angelo was preferred. He also made a model, which is preserved in the Medicean library. He went to Carrara to select the marble, but the pope hearing that there was some equally good to be found in Tuscany, Buonarroti went thither to open a quarry, and there consumed a number of years: consequently the foundations only were laid, and the façade remained to be executed.

When Michael Angelo devoted himself to architecture, he was about forty years of age; nor had he any other masters in this profession than his own natural talents, and the knowledge which had enabled him to become a painter and sculptor, united to the observations he had made on the buildings of antiquity. One of his first works was the Medicean library at Florence, with niches of a novel invention, and a convenient staircase, with singular divisions to the steps, differing from the common practice. He also built the second sacristy of San Lorenzo, one of his most beautiful works. Its form is square, with two orders of Corinthian pilasters; over the cornice of the second order in the centre of the four arches are four large windows, wider at top than at bottom. The roof is richly adorned, as is every other part of the chapel. While at Florence, he sent Pietro Urbino of Pistoja, his servant, to Rome, to fix the naked Christ, which holds the cross, in the church of the Minerva, at the foot of the great altar.

When Rome was sacked, and the Medici banished from Florence, Buonarroti was declared commissary-general of all the Florentine fortifications. He went to view those of Ferrara, and was received with extreme courtesy by the duke Alphonso I. d' Este. The military works which he executed at Florence and San Miniato, have excited the attention of the celebrated M. Vauban, who has given plans and admeasurements of them.

While thus employed, Michael Angelo sculptured seven statues for the chapel of San Lorenzo; and although not

finished, they are wonderful; that of Night Sleeping is particularly beautiful, on which some elegant verses were written.

When Florence was besieged in 1529, Michael Angelo, finding himself in danger, fled, and retired unknown to Venice, with two domestics, and 12,000 gold florins concealed in his doublet. In passing through Ferrara, he was discovered by the duke, who entreated him to remain there; but he determined to proceed to Venice, where all were anxious to know him. It is said that the doge, Andrea Gritti, requested him to make a design for the Rialto. In 1588, that is, twenty-four years after the death of Buonarroti, this bridge was erected by one Jacopo.

Michael Angelo was entreated to return to Florence, which he did, and defended the Campanile of San Miniato against the enemy's artillery, by covering it with bags of wool and mattresses suspended by cords.

From motives of gratitude, he painted the Leda for the duke of Ferrara. It is in water colours; Leda is embracing the swan, and Castor and Pollux proceeding from the egg. This picture was taken to France; it remained at Fontainebleau till the end of the reign of Louis XIII., when a minister of state, from scrupulous feeling, had it cut in pieces. It was, however, put together again in 1740, and in this miserable wreck the learned could scarcely trace the hand of Michael Angelo, who had much improved his colouring, after seeing the works of Titian.

The famous Venus, in fresco, in the Barberini palace, to which Carlo Maratta added some figures of children, is thought to have been by Michael Angelo; but tradition affirms it to be an ancient picture found in the baths of Sallust.

Pope Clement VII., although displeased with Buonarroti for having fortified Florence against the Medici, besides other misdemeanours which calumny imputed to him, desired him to paint, on that side of the Sistine

chapel in which is the door, the Fall of Lucifer, and on the other the General Judgment. The former was not executed; but a Sicilian painter attempted it, from his various designs, in the church della Trinita de' Monti. Although but badly done, there is a certain effect of the terrible, and a variety of naked figures falling from heaven to the centre of the earth, changed into strange and frightful forms of devils; however, there is some merit in the work.

The mausoleum of Julius II. occupied the mind of Michael Angelo: the duke d'Urbino was also extremely anxious for its completion; and, when Clement VII. died, Michael Angelo, being then fifty-nine years of age, hoped to have had the remainder of his leisure to finish it: but Paul III., delighted with the talent of this great man, invited him, by promises and caresses, to enter his service. Michael Angelo excused himself, by alleging his obligation to continue the undertaking, for which he had, at various times, received many thousand crowns. He at first thought of leaving Rome, but, after mature deliberation, yielded to the solicitations of the pope, who had been thirty years endeavouring to get him into his service. His holiness went with the cardinals to the house of Buonarroti, and was perfectly astonished on seeing the designs and statues for the sepulchre. The cardinal of Mantua said that the Moses alone was sufficient to honour Pope Julius. It was finally agreed between the pope and the duke d'Urbino, that the sepulchre should be lessened, which it accordingly was, and then placed against the wall in San Pietro in Vincola, as we now see it. The famous statue of Moses, that of Leah, with a glass in her hand, representing active life, and another of Rachel, symbolical of contemplative life, are all from the hand of Michael Angelo. It is easy to perceive that this sepulchre was put up in haste, and with little care. The architecture is trifling, and the statue of Moses is

placed in so confined a situation, that it is not possible to see it properly.

Michael Angelo now commenced his famous picture of the Judgment, which he finished during the pontificate of Paul III. This work is considered superior to any either executed by him, or by any other artist, however high his rank. Being thus exalted above all other pictures, it consequently received an equal proportion of criticism. By some it was objected, that there were too many naked figures for a place so sacred; but it would be difficult to clothe those who were about to become inhabitants of an immaterial world. One nobleman observed to the pope, that these figures were more fit for a bath, than for so venerable a place. It is said that the painter revenged himself by drawing the portrait of the critic in the character of Minos, among the devils, with a large serpent's tail encircling his waist. The nobleman recognising the portrait, went, extremely incensed, to the pope, who told him, that if he had been put in purgatory there might have been some remedy, but in hell there was no redemption.

Paul IV., scandalised at this "Stufa d' Ignudi," as he was accustomed to call it, had some of the figures covered with a drapery, painted by Daniel di Volterra, and therefore called it Braghettone; which produced some very severe jests from Michael Angelo.

The other exception made to this picture is the mixture of the sacred and profane, of Christianity with paganism: but this was a defect of the age, common to all the poets and orators, and by no means confined to painters. And after all, the only figures really objectionable are those of Minos and Charon; an idea which Michael Angelo took from Dante, for whose writings he had the greatest admiration. How worthy of a monarch's library would that volume be, on the margins of which he drew with a pen all the subjects it contained! This book was a prey to the waves: it came into the possession of the great

sculptor Montauti, who sent it, with many other valuables, from Tuscany to Rome: unfortunately the vessel was wrecked, and every thing lost.

Salvatore Rosa also censured Michael Angelo for his Universal Judgment, in a few severe lines; but he undoubtedly excelled all his competitors in his manner of expressing the different passions and affections of the soul.

While employed on this painting, he fell from the scaffold and injured his leg, which he would not attend to, thinking that physicians, instead of curing such accidents, generally cause lameness or death. But, at length, a particular friend undertook to cure him, and did so. We may say with Dante, of this great work,

Morti li morti, e i vivi parian vivi.

For the greater punishment of the damned, the instruments of the passions are carried by different naked figures. Christ is in the act of hastening forward, with an awful and tremendous countenance, to pronounce the curse, while there is an expression of fear on the countenance of the Madonna, who, encircled by a drapery, surveys the general ruin. An infinite number of figures, apostles, and prophets, surround the judge; the most conspicuous are Adam, the original cause of the scene, and Peter, the foundation "rock" of the Christian religion; underneath is an immense assemblage of saints and elect souls, who are rejoicing. Under the feet of Christ are the seven angels of the Apocalypse, with their trumpets sounding the fatal sentence: their appearance is terrible. Two of them support the book of life.

The seven mortal sins are fighting, under the form of devils, and endeavouring to draw down to hell the souls who are ascending, in most wonderful attitudes. Charon, with his oar, is beating in despair those about to leave his boat. In the attitude of the damned, the ter-

rors of eternal punishment are finely expressed. The several passions are also evident, as the luxurious, the avaricious, the proud, the envious. Buonarroti was eight years engaged on this tremendous work; but it is painted so equally, that it appears to have been done in a day. It was exhibited on Christmas day, 1541. The learned and the ignorant were equally astonished.

The pope now wanted Michael Angelo to paint the Pauline chapel, in which was to be represented on one side the Conversion of St. Paul, and on the other the Crucifixion of St. Peter. These two immense pictures are now almost obliterated, though they are worthy of being preserved, as the last efforts of this great man's pencil. He was then seventy-five years of age; a period of life certainly not calculated for painting, more particularly in fresco. The pope wishing to fortify Borgo, in a congress held on this subject, a violent contest arose between Antonio Sangallo and Michael Angelo. Sangallo said that his antagonist was great as a painter and sculptor, but was comparatively ignorant of fortifications. Michael Angelo replied, that to this subject he had devoted much attention, and the experience he had in fortifying San Miniato, had enabled him rather to surpass Sangallo; and in the presence of all, he pointed out many errors that Sangallo had committed.

How injurious to these great men are such altercations! Michael Angelo was deputed to make designs for the work: they were accepted and executed.

His active disposition would not allow him to remain in idleness; and being no longer able to paint, he commenced sculpturing four figures, saying that the use of the mallet kept him in health. The subject was, Christ taken from the cross, supported by the Madonna, assisted by Nicodemus and one of the Mary's. He intended this group to have decorated his sepulchre, at the foot of the

altar, where he wished to be interred: excepting the Christ, the subject was unfinished.

Antonio Sangallo died 1546, and the pope declared Michael Angelo architect of St. Peter's. He refused this charge for some time, alleging that architecture was not his profession. The pope, however, prevailed, and he was placed in the situation, with uncontrollable power to build and pull down at his pleasure.

Michael Angelo, in gratitude for the confidence reposed in him, declared that he would attend to the building for the love of God without any reward whatever. This declaration was not, like many others, made in the spirit of vain-glory; for, when the pope afterwards wished to remunerate him, he would not accept of any thing. His first step was to disapprove the design of Sangallo, not only on account of the defects referred to in his life, but to save fifty years of time, and at least 300,000 scudi.

He thought by this means to conduct the building with more majesty, grandeur, and facility. In fifteen days he made the model, which cost twenty-five scudi, while that of Sangallo was more than 4,000, and had taken many years to complete. It probably appeared to Buonarroti, that all hitherto done to this edifice had been from motives of pecuniary aggrandisement. His generous nature could not endure such meanness; and previous to accepting the office of architect, he publicly declared to all the workmen, that if they received any extra remuneration without his direction, he would discharge them. He was consequently disliked and defamed.

After these preliminaries, he strengthened the four great piers which supported the cupola. Bramante had constructed them extremely weak: the other architects had with great boldness endeavoured to remedy this, but then they did not appear sufficiently solid for the design. He left two large spaces in the thickness of the great wall, for a winding staircase, sufficiently wide to admit the

laden asses from the top to the bottom of the arches. To the large piers are also left chasms, like wells—probably intended to be filled up; these were as large, it is said, as the church belonging to the convent of the *Padri Trinità*, at the *Four Fountains*. Above the arches is the grand cornice of travertine, differing from the usual custom, in having a less projection, and some members omitted; but it is useless, like all other cornices in the interior of edifices.

Michael Angelo fell into a worse error, which was that of giving too great a projection to the impost of the arches, which stood out before the pilasters. This has an exceedingly bad effect, particularly when looking at the profile of the impost. He began the two extreme curves of the cross, in each of which all the architects before him had designed eight tabernacles or altars. He reduced them to three, with a travertine vault above, divided into a number of elegant and well proportioned forms, with well arranged cornices, also of travertine. If these had remained plain and unadorned, as Michael Angelo intended, they would have delighted all who understood the subject; but now, being full of bas-reliefs and stuccoes, mixed with gold, can only please those who prefer the gaudy to grandeur and simplicity.

At this time the senate, with the approbation of *Paul III.*, resolved to reduce the *Campidoglio* into a beautiful, useful, and commodious form. Michael Angelo was entrusted with it, and made an elegant and rich design. He began from the palace in the centre, destined for the senators of Rome. The external flights of steps, in two divisions, by which the ascent is to a landing midway, was made under his direction. Opposite the staircase, on a basement, were placed two antique gigantic marble statues, the *Nile* and the *Tiber*; and in the centre, within a niche, was to have been a *Jupiter*, instead of which a small porphyry figure of *Rome* was placed.

Michael Angelo did nothing more to this palace; we shall hereafter see by whom it was finished. The other, called that of the Conservatori, and which forms one of the wings of the Campidoglio, was entirely designed by Buonarroti; the ground floor, consisting of two porticoes, an interior and exterior, supported by sixty-eight columns of travertine, of one piece, in the Ionic order, with a beautiful capital, the invention of which is generally attributed to Michael Angelo. The great fault is, that in order to give a width proportioned to the portico, he adopted the unfortunate expedient of sinking the columns in the thickness of the walls. The soffites of the portico are very beautiful; but some which have been ornamented with grotesque stuccoes, have a confused and laboured effect. That of not having placed either frieze or cornice within the porticoes, is a taste certainly to be commended. The doors in the exterior portico are in a good style, but the principal one at the entrance, as well as that of the interior, is bad. The staircase is magnificent, though not sufficiently light, the vault is plain, and the landings richly adorned,—which has a discordant effect. In the external decorations, good sense is certainly offended. On pedestals, a third of the height of the Ionic columns, between which they stand, are erected Corinthian pilasters, which cut the Ionic entablature, and support the mass of the edifice. Although the upper entablature has dentils and modillions, it is continued without a break, and has, therefore, a grand effect; but the inferior entablature remains useless. The windows are too small, and badly ornamented; the capitals of the small columns, which flank them, are so disfigured in their profiles, that it is impossible to decide to what order they belong. The awkward centre window was designed by Giacomo del Duca.

In this building there appears a mixture of good and bad taste, which may have arisen from the architect

being also a painter. It is possible, also, that the defects do not belong to him, as he left the constructing of the work to Giacomo del Porta, to whom succeeded others; and it is well known that all are inclined to make changes. The three palaces of the Campidoglio are crowned with balustrades and statues above. This is manifestly against common sense, though continually practised.

On the declivity of the Campidoglio, near the city, Michael Angelo designed a low wall, or terrace, forming a square, finished at the top by a parapet of balustrades, adorned with statues and beautiful antique ornaments. In the midst of this square is the celebrated equestrian statue of Marcus Aurelius, which Sixtus IV. had placed in the church of San Giovanni Laterano; Michael Angelo made the pedestal of marble, simple, and beautifully proportioned. The architecture of the modern Campidoglio is elegant, but it is small and insignificant, when compared with the glory of the ancient capital. Modern Rome has centred all her magnificence in the Vatican. We must remark, that the two lateral palaces of the Campidoglio are not parallel, but incline towards the centre palace: their inclination is as 4 to 3. The reverse should have been the case. Had they inclined towards the square, the façades would have been shewn in a better point of view.

The Farnesi palace, the work of Sangallo, wanted, as we have already observed, a cornice; for this Michael Angelo made a wooden model 11 feet high, and had it placed on one of the angles, to see the effect; a practice observed in the earliest times, and one which it would be well always to adopt, when there are no certain rules of optics. The model gave general satisfaction; but, although very beautiful, it is not equal to that copied from an antique by Il Cronica, and erected in the Strozzi palace at Florence. It is, however, the best proportioned and most

majestic in Rome; but the modillions should not have been carved. The lilies might have been less frequent, and the lions' heads, for conducting the water, would have been better omitted; less ornament, and more boldness, would have better suited the imposing and serious air of the palace. It is said that the large window in the centre of the façade was designed by Michael Angelo: be it by whom it may, the effect is bad. The small and beautiful columns are mixed and improperly placed; the opening is too wide, and the number of pilasters causes great confusion. The first story of the court is a regular Doric, but the columns attached to the piers which support the arches are injured by the cornice of the imposts projecting too much. The second story is a well arranged Ionic. The third, which is Corinthian, looks trifling, and has too many projections in the angles. In this court are three entablatures, although there should only have been one to crown the whole edifice.

During the building of this palace, there was found, in the baths of Antoninus, the famous Farnese bull; the largest group, of one entire mass, ever known, being 13 feet high and 10 feet wide, comprehending five statues, three of which are larger than life, viz. the formidable bull, a dog, and a serpent. To the bull is bound Dirce, for love of whom Lycus, king of Thebes, repudiated and imprisoned his wife Antiopa, mother of the two ferocious youths, Zethus and Amphion, who, on the death of their father, revenged themselves on Dirce in this barbarous manner. This group, according to the common opinion, was sculptured in Rhodes by Apollonius and Tauriscus, two celebrated statuaries, but it is not equal to the best productions of Greece. It was formerly in the house of Asinio Pollione, and is now in a kind of workshop at the back of the Farnesi palace, where it was placed by Michael Angelo, who intended to have made a second court, and used the group for a fountain. Opposite to

the Strada Giulia was to have been a bridge over the Tiber, to enter the palace; whence, by a direct road across the Campo di Fiore, a coup-d'œil would be obtained of the Farnese façade; the first court, the fountain with the bull in the second court, the Strada Giulia, the bridge, a garden, the Farnesina, and the Strada Lungara: an idea worthy of Paul III. and Buonarroti. At this time also was discovered the Farnese Hercules, but without legs. They were replaced by the Brother Guglielmo della Porta, an excellent Milanese statuary, after a model by Michael Angelo; and were so well executed, that when the originals were at length found, Michael Angelo was of opinion that the former should remain, and the latter be placed in the villa Pinceana, although certainly far superior in execution to the modern.

To Paul III. succeeded, in 1549, Julius III., who was much attached to Michael Angelo, and continued the advantages conferred on him by his predecessor. But the Sangallesian faction still insisted that Michael Angelo had spoiled St. Peter's, and left the church without sufficient light. The affair became at last of such importance, that at a grand convocation the pope observed, that the deputies (the cardinals Giovanni Salviati and Cervino, afterwards Marcellus II.) considered the cross transept too dark. Michael Angelo replied, that under the travertine vault, which still remained to be done, were to be three other windows; and gave so clear an account of every thing, that the assembly retired perfectly satisfied.

The pope encouraged Michael Angelo to do his duty, and frequently invited him, in company with Vasari, to visit his vineyard, without the Porta del Popolo. Going thither one day, when the pope and twelve cardinals were standing round the fountain, he made Michael Angelo sit down by his side. This pope was desirous of building a palace at the side of San Rocco, and to use the materials of the mausoleum of Augustus for some of the walls.

Buonarroti made a design for it, at once varied, ornamental, and whimsical. If this design be not in the Medicean gallery, it is most probably lost.

The pope not only protected Michael Angelo in his disputes with the cardinals, and against those who calumniated him, but even wished the best artists to go to his house, and consult him as an oracle. So great a man merited certainly both deference and respect, especially after the circumstance relating to the ancient bridge of Santa Maria. After Buonarroti had taken immense trouble to strengthen the foundation, Nanni di Baccio Bigio persuaded the clerks of the chamber that he would finish it in a less space of time and at a less expense; and assured pope Paul III., that Michael Angelo, not being enabled to superintend it on account of his great age, willingly left it to him. By these arts, and without the knowledge of Michael Angelo, Nanni commenced the bridge, and finished it in a short time. In five years, that is, at the close of 1551, it no longer remained. Michael Angelo had predicted its fall, and whenever he passed over it ran with rapidity, saying, it appeared to shake under him.

During the pontificate of Paul IV. Michael Angelo was deprived of the office of chancellor of Rimini, which he had enjoyed for some time, but such was his disinterestedness, that he never would mention it to the pope; and having also lost that of St. Peter's by the same artifices that had deprived him of the former, he was assigned as a recompense 100 scudi a month; but when the first hundred was brought him, he refused to accept them, and persisted in remaining silent.

The leisure moments of Michael Angelo were employed on the marble intended for his sepulchre, but it caused him much vexation, finding it full of blemishes; and not succeeding to his mind, he broke it up. Feeling himself, however, lost without his chisel in his hand, he com-

menced a smaller Pietà, in which the Christ is finished. It is now behind the high altar of the cathedral at Florence. In his youth, Michael Angelo finished his sculptures, but in advanced life, when better acquainted with the arts, he became less satisfied with his own works. On discovering the least error, he would put aside the marble, and commence another.

Michael Angelo, now eighty-one years of age, was extremely desirous of finishing his days at Florence; whither he had been so often invited by the duke Cosmo, and so earnestly by Vasari; but he was prevented, not so much from his years, as from the interest he took in the building of St. Peter's, which underwent continual alterations under his eye, through the inexperience of the workmen and the malignity of persons interested in protracting the work. Among the architects of St. Peter's, was the Signor Don Pirro Ligorio, a Neapolitan nobleman of Porta-Nuova. He treated Michael Angelo as in his second childhood, and wished, in consequence, to alter the order of the building. Paul IV. could not endure such presumption, and consequently deprived him of the charge. Buonarroti was a rock, against which beat the storm of envy, calumny, and the malice of all those who expected to derive some benefit from the fabric. The edifice was already completed as far as the beautiful drum of travertine on which was to be placed the cupola. All the friends of Michael Angelo, and especially the cardinal di Carpi, induced him, notwithstanding his years, and in consequence of the lowness and want of talent in others, to make a model for the cupola. He at length completed a small one in clay, from which was formed one of wood, after much labour and study on the part of Buonarroti, by Maestro Giovanni Farnese. This model was admired by all, and at length executed under Sixtus V. The intrigues and artifices, however, woven against Michael Angelo, during the erection of this building, are

almost without number. Nanni Bigio was made his substitute, without his knowing any thing of the circumstance. It was this same Nanni who spoiled the bridge of Santa Maria and the gate of Ancona: he also built the Salviati palace at Lungara, and the Ricci in the Strada Giulia. Michael Angelo related every thing openly to pope Pius IV., who rendered him justice, and ordered the superintendents not to deviate in the slightest degree from the design of Buonarroti. Pius V. renewed the same order, and insisted on its being attended to. Had this been acted upon, we should not now have to regret so many defects in the greatest temple in the world.

Michael Angelo made three designs, all equally whimsical, for the Porta Numentana, which Pius IV. wished to erect, and which consequently received the name of Porta Pia. The least expensive one was chosen and nearly executed, but, after a space of 200 years, is not yet complete. This gate has no architectural regularity, but is of an extravagant composition. Of the other designs which he made for the gates of Rome, it is not known that any were executed. All his erections of this kind were irregular; that at the Vigna del Patriarca Grimani partakes of every species of architecture. The order is Doric, the termination Ionic, the ornaments of the columns Gothic, the mouldings all Corinthian. His profiles were never the same, sometimes sharp and whimsical, sometimes regular, as in the great Farnesi entablature, and that of the Campidoglio.

Though now quite infirm, he gave five designs to Tiberio Calcagni, a Florentine sculptor, for the church of San Giovanni of the Florentines, and left the choice to the deputies' commissioners; they determined on the richest. He then said, that, if closely attended to, they would have, when completed, a temple far surpassing in beauty any thing imagined by the Greeks or Romans. So egotistical a remark never before proceeded from his

modest lips. A model of this design was made in wood, and preserved till latter times; but when under Clement XII. the façade was to have been erected, it could not be found. It is possible that the priests, who had the care of it, might have burnt it. Clement XII. thought to have used it for San Lorenzo of Florence, where it was not executed; and it was extremely well adapted for San Giovanni of the Florentines, but the architect Galileo dissuaded him from it, saying, that the design was too antique, and differed too much from the modern style. To our disgrace, his observation was too true: This was a proof of it.

The design of Michael Angelo for the church della Certosa, in the midst of the baths of Dioclesian, was preferred to those of many architects; it was executed, and gained universal admiration. "Latterly," says a great man, in his Dialogues on the Three Arts of Design, printed at Lucca in 1754, and in the Life of Michael Angelo by Vasari, printed so many times at Rome, and the last in 1760, "This church has been entirely changed from the design of Michael Angelo. The principal door has been walled up; it was magnificent, entirely of travertine; and where stood the gate is now a chapel and an altar, by Beato Niccolo Albergati. Four large niches were walled up, which led into ancient and majestic interiors, left by Buonarroti for chapels. The transept is now made the principal body of the church; and the nave, which should always be, and was the most conspicuous part, is reduced to a mere accessory one. Finally, instead of that superb door which architects were never weary of admiring, the entrance is now by a side porch, placed in an ugly contemptible concave façade, with the necessity of descending not less than ten steps, as if going into a grotto: an idea differing from that of Buonarroti, with many other incidents equally monstrous, was reserved for that age, to be a perpetual monument of the degradation to

which architecture has arrived, and of the taste belonging to those who undertake great buildings.

It is somewhat curious, that the same degree of praise was lavished on the design of the modern architect as on that of Michael Angelo, which would lead us to imagine that the former was superior to the latter, and to all the architects of antiquity, or that a total change has taken place in the ideas of mankind, which is very possible to be the case.

It is not, however, just to attribute all these disgusting alterations to Signor Luigi Vanvitelli. It sometimes happens that a clever man cannot act according to his own principles. The merit of this artist was really great, as will be seen hereafter.

Guido Antonio Sforza, cardinal of Santa Fiore, caused Michael Angelo to erect the noble chapel of Santa Maria Maggiore, who gave the direction of it to Tiberio Calcagni. In consequence of his death it remained imperfect, but was completed, with some variation in the design, by Giacomo della Porta. It had a superb façade within the church, which was removed when Benedict XIV. re-modernised the basilica. At the request of Michael Angelo, the same Tiberio completed a bust of Brutus, copied from an ancient cornelian belonging to the Signor Giuliano Cesarini. This bust is now in the gallery at Florence, having a metal label, on which is inscribed this distich, said to be by Bembo:—

Dum Bruti effigiem ducit de

Marmore sculptor

In mentem sceleris venit, et

abstinuit.

The Strozzi chapel at Florence was designed by Michael Angelo, as also the Sapienza of Rome, except, perhaps, that part where the church is situated. The Sapienza is a grand and magnificent edifice, well laid out, with elegant decorations to the doors and windows; but exteriorly the

windows are badly placed. The imposts of the arches in the court project too much before the pilasters: in the porches of the long sides there is a confusion in the capitals, the ornament of the windows, and the cornices of the doors; the staircases are beautiful, but too formal.

For Tommaso de' Cavalieri, a Roman gentleman, from early youth attached to drawing, Michael Angelo drew a number of heads in crayons, a Ganymede carried off by the Eagle, a Prometheus devoured by a Vulture, the fate of Phæton, and many other subjects. These drawings are now dispersed. As Buonarroti was much beloved by the Marchesa of Pescara, who often went to Rome expressly to see him, he drew for her a dead Christ, resting on the knees of the Madonna. A number of copies have been taken of this piece, which have passed in the galleries for originals. He also drew a Crucifixion, said to be in the possession of the Borghese family, of which the story is told of Buonarroti nailing a man to the cross, to enable him to catch the expression.

Michael Angelo studied anatomy with great attention; it is said that for twelve years he was in the habit of dissecting men and beasts, and particularly horses, in order to observe the formation and ligatures of the bones, the muscles, the nerves, their various movements and positions; but, in consequence of so continually touching dead bodies, his stomach became so affected that he had no pleasure in taking food. He had at one time an idea of writing a treatise on anatomy, but from some cause relinquished it. This is to be regretted, for the sake of those who wishing to imitate him, and not possessing his profound knowledge, have fallen into absurdities, as he predicted. His maxim was, *Those figures are good which are so artfully arranged that they appear natural:—“ L' arte, che tutto fa, nulla ti scuopri.”*

He was industrious in all his pursuits; he meditated deeply; but frequently could not execute with his hands

the ideas generated in his mind: he then destroyed his works, burnt his drawings, and recommenced again. To draw Minerva from the head of Jove, he saw that the hammer of Vulcan was requisite. In fact, he laboured hard to acquire that union of the graces which was observable in every thing. He lived in solitude, if he can be called solitary who possessed so many sublime resources. To amuse his mind, he sometimes conversed with his friends, among whom were the first literary men of the time, cardinals Polo, Bembo, di Carpi, Maffeo, Ridolfi, Santa Croce, afterwards pope Marcello II., Annibal Caro, and others. He studied Dante and Petrarch, and also composed some poetry, which has been published. He also studied the Holy Scriptures, and read the works of Savonarola.

The pontiffs Julius II. Leo X. Clement VII. Paul III. Julius III. Paul IV. and Pius IV., under whom he lived, all loved and esteemed him. Among these Julius III. excelled in his admiration of this great man. This pope regretted that he never asked him any favour, when, had it been in his power, he would have given him years to have lengthened a life so valuable to the world. He was accustomed to say, that if Michael Angelo died first, he would have him embalmed, and be himself laid at his side. Thus was Michael Angelo to be converted into an oracle and a mummy. Great men should, indeed, live the years of the antediluvians.

The Medicean dukes yielded to none in their kindness and attention to Buonarroti. When Cosmo I., grand duke of Tuscany, went to Rome, he not only insisted on his being covered, but seated him between his knees, almost on them. Ottaviano de Medici solicited him to stand sponsor to his son; and the cardinal Ippolito having heard that Michael Angelo was pleased with a Turkish horse belonging to him, he immediately sent it, with ten mules laden with corn, and a groom to attend them. Francis I.

of France, desired his services, and ordered him to receive 3000 crowns immediately, to enable him to undertake the journey. The emperor Charles V. rose on seeing him, and exclaimed, "Emperors may be found, but never your equal." There are some who think good emperors more rare than good artists. It is said that Charles V. having asked him what he thought of Albert Durer, he replied promptly, "Were I not Michael Angelo, I would rather be Albert Durer than Charles V." The republic of Venice and the grand Turk were equally desirous of having him.

Buonarroti had a prodigious memory; he remembered every thing he had once seen; whence arises the variety of his figures. Requiring but little sleep, he rose in the night to work, and for this purpose he contrived a card dish, and in the centre a lighted candle. When old and decrepid, and in the midst of snow, he was one day met by the cardinal Farnese, near the Colosseum, who asked whither he was going at his age, and in such weather. Michael Angelo answered, That he was going to the school to study. To a priest, who reproved him for never having taken a wife, he replied, "My profession is my wife, and my works are my children, which, if they are good for any thing, will live for some time."

To these rare talents he united much prudence in speaking, sometimes enlivened by pleasing, acute, and just sallies. When he heard that Bandinelli boasted of having excelled the originals in his copy of the Laocoon of Belvedere, which copy is now in the gallery of Florence, Michael Angelo said, "He who gets behind another can never pass before; and he who does not think well of himself, can never make a good use of the works of others." A sentence which should be written in characters of gold on every gate and bench of the schools, be the science or art what it may, and which should be imprinted on the minds of all. This explains the phenomena of the decline of art: it is not the want of patrons, as the commonalty

pretend. How many great men have become so without the assistance of any one, and amidst many disadvantages! It is not the want of genius, Nature is always the same. The cause of the decline is the imitating the works of others: and thus by placing ourselves in the back-ground we continually remain so.

All the masculine moral virtues were united in Michael Angelo. He was a good Christian, destitute of resentment, modest, and patient. He was so temperate, that he frequently lived for whole days on a little bread and wine, that he might pay the greater attention to his work — like Protogenes, who lived on seeds while painting his great master-pieces. Disinterested in the extreme, he refused every species of reward; liberal with his own, he gave much to his friends. He knew the proper use of money, bestowed much on the poor, portioned several girls secretly, and provided well for an old servant named Urbino. “When I am dead, what will you do, my dear Urbino?” said he once to him. “I must serve another,” was the reply: Michael Angelo then gave him 2000 crowns. To his nephew, Leonardo Buonarroti, he frequently gave 3000 or 4000 crowns at a time, and at last left him 1000, besides what he had at Rome. He was attached to artists, among whom were Jacopo Sansovino, Il Rosso, Il Punturmo, Daniello da Volterra, and Vasari: but he was unfortunate with regard to his pupils, not meeting with one, during the course of so long a life, who had either talent or inclination to learn, although he paid the most affectionate attention to them.

Exempt from all vanity, he never drew his own portrait, nor had it drawn by any one, except by Tommaso Cavalieri, as he never found perfect proportion in any one.

He was of a middling stature, wide across the shoulders, but well-proportioned in every other part of his body; his face was round, with a fine expression. His complexion

healthy, although he was sickly in his youth, and in old age suffered from an internal complaint. He died at the age of 90; his father lived till 92. His will was comprised in three sentences:—"My soul to God, my body to the earth, and my estate to the nearest relation." These few words were, however, useless. The body was interred with the most solemn obsequies in Santi Apostoli; from whence the pope removed it to St. Peter's; but the grand duke, Cosimo I., by means of Leonardi Buonarroti, his nephew, had it secretly carried away to Florence. It had scarcely reached that place, when all the professors of painting met and conducted it to the church; and, though at night, the news spread so rapidly, that every window and street was filled with a concourse of people and lights. The church of San Lorenzo, which was reserved for the interment of monarchs only, received the corpse of Michael Angelo. The funeral rites were celebrated with a pomp and splendour surpassing all imagination. By permission of the grand duke, the best painters, statuaries, and architects, Vasari, Cellini, Ammanati, Bronzini, all rivalled each other in endeavouring to honour him with their several arts, whose merit had so much tended to promote them. The preparations in the church were superb; they merit a long description; the obsequies were deferred for many weeks, that not only the city, but all Tuscany, and strangers also, might have the opportunity of testifying their admiration of him. When the day arrived, every one relinquished their pursuits, and hastened to be present at the ceremony. The celebrated Benidetto Varchi pronounced an eloquent oration; and the poetic compositions were innumerable. He was finally buried in the church of Santa Croce, with his ancestors. The grand duke, besides the marbles, contributed money to erect a suitable monument to his memory, the design of which was by Vasari, and the statues by various artists: it consists of the bust of

Michael Angelo, and three statues symbolical of the three noble arts which he practised with so much success.

It is singular, that on opening the coffin twenty-five days after his death, the body, though not embalmed, was found perfect, without the least unpleasant smell, appearing like an old man in a calm sleep. It is still more extraordinary, that on opening the sepulchre forty years afterwards, perhaps to repair it, the senator Filippo Buonarroti and many others being present, the body was still perfect; and the sole of one of his slippers flew off to the distance of two braccia, from being so dry.

In Buonarroti, we have the singular phenomena of a man perfect in three professions. The fables of antiquity have united several Herculi to form one prodigy. But in Michael Angelo we have three great artists, a sculptor, a painter, an architect, and each excellent;—this triple excellence remains to the present moment unrivalled. Far, however, from regarding him as endued with divine powers, which some have done, we must think of him as a man, and, consequently, subject to error. With respect to statuary and painting, we leave his merits and defects to those who may treat on those subjects. We shall speak of him as an architect.

In the church of St. Peter, we see the architectural grandeur of Michael Angelo. He rejected, and with reason, the design of Sangallo; he formed the plan of a well-proportioned and elegant Greek cross, terminating three extremities semicircularly, and the other square, with ample wings in the flank of the great nave. One single order of majestic Corinthian pilasters, decorate both the interior and exterior of this grand temple. The order of the façade was to have been the same, and of the same height, as that within. It is now ornamented with eight large pilasters, having three doors in the centre, and four large niches. The interpilasters, in which were the doors, were wider than those which contained the

niches. Opposite to each pilaster a column was placed, forming a portico with seven intercolumniations in front. It is impossible to say whether these intercolumniations of various widths would have produced a good effect. The three centre intercolumniations were repeated, forming a double portico, the front terminated at the top by a pediment—we may also doubt if this would have looked well. The grand cupola had, as it were, the whole church for a base, on which it rose surrounded by the four smaller ones. The whole was on a grand, noble, beautiful, and majestic scale, and evinces the sublime talent of Buonarroti, exciting indignation towards those who have so disgracefully deformed it.

We now come to the detail of Michael Angelo's work in St. Peter's. We have already touched upon the defect in the impost of the arches exceeding the projections of the pilasters. The ornaments of the windows and niches, and the vaults of the superior niches above the necking of the pilasters, cannot certainly be admired; and how are we to endure those unsightly pediments over the large windows of the transept, whilst every pediment within must be considered useless? The attic, which surrounds the temple exteriorly, is too high; the windows badly formed, and the ornaments extremely heavy. This attic is so evidently irregular, that the advocates of Michael Angelo deny its being his. The drum of the cupola is superb, the figure of the latter excellent, and the mechanical part wonderful; but the lantern with those flambeaux is by no means agreeable: here, again, his admirers, as if paid by him to defend his works right or wrong, maintain that this also was not his design. The exterior basement of this great edifice is beautiful; but the numberless angles, with the pilasters, which make their appearance one under the other, are most insufferable.

The church of St. Peter, and the sacristy of San Lorenzo at Florence, are the finest works of Buonarroti;

and these, with every other, shew a genius in invention, sagacity in the arrangement, and a perfect knowledge of construction. But in his ornaments he took great liberties; he sometimes departed from all good rules, introduced a certain boldness, mixed with the whimsical, which were his peculiar characteristics in painting. He used to say that he knew little or nothing of architecture: this might merely be an expression of modesty. It is, however, certain that architecture was not his original profession. He still merits a distinguished rank among architects. If he had applied himself to discover its origin and rules, he would not have committed so many errors. His caprices have been a ladder for those of Borromini and the modern school. His famous saying, "We should have the compass in the eye," has been abused, and has made many architects sworn enemies to labour. It is impossible to have a knowledge of proportion without having had the compasses for some time in the hand; at the same time observing the best works, in order to form a just taste, and produce something valuable.

GIACOMO DEL DUCA, A SICILIAN.

HE studied architecture and sculpture under Buonarroti at Rome. Over the cupola of the Madonna de Loretto at Rome, said to be the work of Sangallo, del Duca erected an insufferable lantern, and built the ill-proportioned lateral door to the same church. The large unsightly window of the palace Conservatori in Campidoglio is also his work, as well as the Panfili palace at Fontana di Trevi, which has distorted modillions in the entablatures, and other deformities in the windows. The works of this architect shew him to have been a bad disciple of Michael

Angelo. The small palace, which he erected in the Strozzi gardens near to Villa Negroni, is tolerable, and his designs for the Villa Mattei* are certainly well arranged. After having executed many things at Rome and Caprarola, he went to Palermo, his native place, where he was nominated principal engineer; but so much envy was excited towards him, that he was barbarously murdered. He was a tolerably good poet.

MARCO DI PINO, OF SIENNA,

FLOURISHED about the middle of this century. He was a painter; and after executing several pictures at Rome, established himself at Naples, where he also professed architecture.

He remodernised the church of the Trinità di Palazzo; but his principal work was the church and college of the Gesu Vecchio, a magnificent structure, and well arranged, which is now used as the university of Naples. He published a large work on architecture, and made also a collection of the lives of Neapolitan artists.

* The Villa Mattei is situated near San Stefano Rotondo, on the Cœlian Hill, and was commenced in 1581, and terminated 1586. The plan and view will be found among "les plus célèbres Maisons de Plaisance de Rome, mesurées et dessinées, par Charles Percier et P. F. L. Fontaine."

ANDREA BRIOSCO, OF PADUA,

BUILT, about 1501, in his own city, the grand church of Santa Guistina,* in conjunction with Alexander Leopardo, a Venetian; both were architects, sculptors, and workers in bronze. This church is said to be in the *harmonic medium*; and those who are fond of calculation, may testify themselves by the following dimensions:—

The length of the principal nave is 368 feet, the height 82, the width 42, the transept 252 long; it has three naves, and the whole width is 98 feet. It has eight cupolas, and the height of the largest to the top of the statue is 176 feet. From these numbers, it would surely be difficult to discover any harmonious result. Be that as it may, this is one of the most sumptuous and magnificent churches in Italy, and yet is without a façade. This architect was surnamed Riccio, on account of his curling hair: he was also a good statuary, of which there is a proof in the great candelabra, supported by the evangelists, at the altar del Santo, that is, of Sant Antonio at Padua. For this work he received a medal, bearing this inscription:—

Andreas. Crispus. Patavinus Æreum D. Ant. Candelabrum. F.

ALESSANDRO BASSANO,

A learned gentleman of Padua,† built the loggia and hall of the senate-house, in the square of the Signory at

* Voyage en Italie, par M. de la Lande, tom. ix. p. 15.

† Ibid. tom. ix. p. 35.

Padua. The ascent to it was by twelve steps of hard stone. The entrance is divided into seven arches, with two others in the flank, supported by six columns of marble, and by four large double pilasters, of a beautiful Corinthian order, all adorned with sculpture. It was finished in 1526, and is erroneously attributed to Sansovino.

GIULIO PIPPI, CALLED GIULIO ROMANO,

(Born 1492, died 1546,)

A painter of the first class in the school of Raphael,* whose heir he in some respects was: he became equally celebrated in architecture. He designed the beautiful little palace of Villa Madama, now in ruins.† He built another palace on the Pietro Montorio, which now belongs to the duke Lante. He also designed the church of the Madonna dell' Orto, in the form of a Latin cross, with three naves, a well-proportioned and beautiful chapel at the back, and the two arms of the cross semicircular. The beautiful palace of Ciciaporci, on the Strada di Banchi, is by him, and also the palace Cenci, over the Piazza of St. Eustachio, contiguous to the Lante Palace. The duke of Mantua, delighted with the works of Romano, made use of every means to have him near him, and treated him with the most marked distinction. The palace del T., without Mantua, is one of the most renowned in Italy, both for its architecture and paintings. This

* Vasari, tom. vii. p. 197, &c.

† The Villa Madama, so called from having been occupied by Margaret of Austria, natural daughter of Charles V., is situated at a distance of half a mile from Rome, on Monte Mario, out of the gate Porta Angelica. It probably was never finished.

palace was originally intended for stables and other conveniences for the chase, with a small summer residence attached to it, but the design of Giulio Romano carried it to the greatest pitch of magnificence. The room, in which is represented the battle of the Giants, is built in a most singular manner: it is round within, and vaulted; the walls, windows, and angles, are rustic work, and apparently split and broken, as if falling with the Giants, struck by the thunderbolts of Jove: though its diameter is not above 30 feet, it looks an immense size. The pavement is composed of small round pebbles, and the plinth of the walls is painted in the same style, to correspond with the pavement. He modernised and enlarged the ducal palace, and erected another for the duke at Marmiruolo, five miles from Mantua.

On the arrival of the emperor Charles V., he erected triumphal arches of the most elegant designs.

He raised several new embankments; and it being in contemplation to erect a number of new houses, the duke issued an edict, forbidding any one to build without the direction or advice of Romano. If such an arrangement were more frequently made, the cities would be more regular, convenient, and beautiful. He erected a house for himself in a very odd taste. He repaired the church of San Benedetto, of the Cassinisi monks, rebuilt the dome, and performed so many distinguished works, both in architecture and painting, within and without the city, that the cardinal Gonzaga used to say, Mantua was created by Giulio, and belonged to him.

His design for the façade of San Petronio in Bologna, was considered the most beautiful, among an immense number, by the most celebrated architects. It is of one order, a medium between the Gothic and the Greek, the better to adapt it to the church. Its grand and picturesque effect cannot fail to delight the spectator, and evidently

shews that Romano even excelled more in architecture than in painting.

The reputation of Giulio Romano stood so high, that he was appointed architect of St. Peter's, and was earnestly entreated to repair to Rome, which he undoubtedly would have done, notwithstanding the repugnance of his family and that of the duke of Milan, had not the hand of death prevented him.

The buildings he left unfinished were continued by Bertani, who erected the bell-tower of Santa Barbara, the finest in Italy.

JACOPI TATTI, CALLED SANSOVINO,

(Born 1479, died 1570.)

HIS father was Antonio Tatti, a Florentine, but being a disciple of Andrea Contucci,* of Monte Sansovino, from the reciprocal affection which existed, and which always should exist, between the master and pupil, he was called Sansovino. At a very early period, he evinced a peculiar genius for architecture and sculpture. He accompanied Juliano Sangallo to Rome, and studied the antique with great assiduity; he became the friend of Bramante, and a beautiful statue which he executed soon introduced him to the notice of the nobility and artists. His health obliged him to return to Florence, whither pope Leo X. had gone, in 1514. Sansovino then decorated Santa Maria del Fiore, with a false façade of wood, extremely well conceived. On a very large base he arranged couplets of columns of the Corinthian order. Between these were niches, with figures representing the apostles. The columns

* Vasari, tom. ix. p. 291.

supported a cornice and pediment, with various projections. He executed the statues and bas-reliefs, and Andrea del Sarto painted some historical subjects in chiaro-scuro. The façade was so beautiful, that the pope exclaimed, "What a pity this is not the real façade!" On the return of his holiness from Bologna to Florence, Sansovino erected a triumphal arch at the gate of San Gallo. He also made a design and model for the façade of San Lorenzo at Florence, but although possessed of great merit, that of Michael Angelo was preferred.

On his return to Rome, besides executing a number of statues, he erected a loggia on the Via Flaminia, without the Porta del Popolo, for Marco Coscia; the church of San Marcello, which remains imperfect; and near Banchi, a convenient and beautiful palace for the Gaddi family, and now belonging to that of Niccolini. His greatest work in Rome was a design for the church of San Giovanni, of the Florentines. The Tuscans, then under Leo X., became jealous of the Germans, Spanish, and French, and were anxious to surpass them by building a church, which, in size and magnificence of architecture, should excel any belonging to those nations. Raphael d' Urbino, Antonio Sangallo, and Baldassari Peruzzi, were each anxious to become the architect. The design of Sansovino was preferred by the pope.

The situation selected was on some ground surrounded by the Tiber. The difficulty of making the foundation, and the expense, appeared great to every one; and Sansovino found it more intricate to build in the water than he expected. He failed, and in consequence made a pretext of going to Florence, leaving the care of the building to Sangallo, who successfully performed what Sansovino had not the courage to attempt. From Florence he went to Venice, and on hearing of the election of Clement II. returned to Rome; but a little time after was obliged to escape from it, on account of the sacking of

the city. Abandoning his children he retired to Venice, from thence he went to France, where he had been invited some years before by the king. The doge, Andrea Gritti, being well acquainted with his merit, proposed that he should establish himself at Venice; he willingly accepted the invitation, and was declared proto or principal architect of the Procuratie "de Supra."

His first work in Venice was the repairing the cupolas, which were not injured by age, but by a fire which had happened a century before, and which had so much damaged them, that they were obliged to be supported. He surrounded the centre one over the transept with a large iron hoop, which was, moreover, strengthened with other ties, also in iron. This circle was placed outside, a little above the arches of the large windows. He repaired the others, with much credit to himself. He afterwards continued the Scuola, or building of the Confraternita della Misericordia, which had been began many years before, according to the model of Alexander Liomparado. This building is imperfect, and shews the Sansovinesco character both in the niches and proportions. The whole consists of two magnificent halls, one above and one below, with a staircase and one other apartment: the lower one is of the composite order, divided into three naves, with three distinct orders of columns, and the lateral walls, which support the floor. The church of San Francesco della Vigna, although small, does much honour to Sansovino, but he did not entirely finish it. The cupola and façade were according to the designs of Palladio.

The edifice of the Zecca, or Mint, a truly royal work, entirely of Istrian stone, and rusticated, is one of the finest designs of Sansovino; and still more noble is the famous library of St. Mark. It has two orders: the first a highly ornamented Doric, the second an elegant Ionic, with a grand frieze and noble partition. Over the cornice

is a balustrade, with beautiful statues above, by the ablest scholars of Sansovino. On the ground floor is a portico, raised three steps from the level of the piazza: it has twenty-one arches, supported by pilasters, to which there are external columns, with other arches corresponding to the interior, sixteen of which, with their internal rooms, are used for shops. The centre arch conducts to the noble staircase, divided into two branches. At the top of the staircase is a hall, formerly used for a public school, and now as a museum for ancient statues, the gift, in great part, of the cardinal Domenico Grimani, and Giovanni Grimani, patriarch of Aquila. Beyond this is the library, which occupies seven arches in length and three in width. The ceiling is vaulted, divided into a number of compartments, and ornamented with paintings. On the other side of the building are the rooms for the officers of the Procuratie, but the vault was scarcely finished when it fell; some said from the carelessness of the masons, others attributed it to the extraordinary frosts, many to the discharge of cannon from a ship near it, and some, perhaps with most reason, to the architect's relying too much on iron ties. For this misfortune Sansovino was imprisoned, fined a thousand crowns, and deprived of his situation as Proto. All his friends exerted themselves for him: Pietro Aretino, who, among his many vices, had some virtues, and that rare one of being a sincere friend, was most active in his behalf; and Mendozza, who was first ambassador from Charles V. to Venice, sent an express from Sienna, where he was governor, to assist Sansovino. He was at length set at liberty, his fine remitted, his situation restored to him, and commissioned to build the new vault, which was not of stone, but of reed-work, plastered. On adorning it with the Doric order, Sansovino proposed this problem,—“How to make the exact half of the metope fall in the angle of the Doric frieze.” All the architects of Italy endeavoured to solve it; Sansovino did

so, by lengthening the frieze to supply what was wanting in that portion of the metope: both the problem and the solution are absurd. He made the entablature a third of the height of the column, which is unexampled in any thing either modern or antique. The library of San Marco has been censured as too low, when compared with the ducal palace, to which it is opposite: but Sansovino had in view the height of the old Procuratie over the great piazza, which he wished it to resemble, in order that the whole square should be surrounded by buildings of the same altitude. Scamozzi, carried away by his vanity, afterwards altered the design. Palladio considered the library the most highly ornamented building that had been erected, from the time of the ancients to the present. It is embellished with every variety of marble, beautiful columns, bas-reliefs, stuccoes, and statues; and the architecture is devoid of any unnecessary projections; the cornice of the first order is not too large, and that which crowns the superior order performs its proper office.

The palace of the Cornari, on the grand canal at San Maurizio, is one of the most successful works of Sansovino. He also built on one side of the campanile of San Marco a loggia, for the Venetian nobles and virtuosi to assemble in, but it is now used for the Procuratore of San Marco, who remains there on guard during the sitting of the great council. This small edifice is somewhat elevated above the level of the square; the ascent is by four steps to a small terrace, surrounded on three sides by a balustrade, which is before the façade. This latter has eight columns, detached from the wall, of the Composite order, supporting an elegant and continued entablature. Between the greater intercolumniations are three majestic arches, through which is the entrance to the gallery. The four minor intercolumniations are filled by four highly ornamented niches. Above, and plumb with the arches, is an attic, divided into three larger and four lesser open-

ings, corresponding with the seven intercolumniations. Over the attic is a balustrade, which is continued along the three sides of the building. The whole is of marble, with fine statues and bas-reliefs. This loggia was to have surrounded the campanile entirely.

When repairing the church of Santo Spirito, he erected the choir and façade. He built the Delfino palace, on the grand canal, near San Salvatore: the interior is conveniently arranged, and the façade, towards the canal, extremely noble. The church of San Salvatore was began after the design of Giorgio Spavento, and terminated by Tullio Lambardo in 1569. Scammozzi afterwards opened a lantern in the cupola, to admit more light.

The church of San Fantino, one of the finest in Venice, is by Sansovino, as is also that of San Martino, near the arsenal; that of the Incurables, of an elliptical figure, and the School of San Giovanni, degli Schiavoni, the Cortile del Bo, or the University, and the great council hall at Padua; although the latter is not in his usual style.

Many of the buildings at the Rialto, now called "the New Buildings," particularly one at the public expense, and erected for the convenience of commerce, was also designed by him. It has three stories; the first is rustic, distributed into twenty-five arches; the second Doric, and the third Ionic, with windows corresponding to the arches. In the first are a number of shops, for various uses, with stairs leading to the other two; each of which is divided into three parts, one corridor in the centre, and two files of rooms at the sides. But the great fault in this building is, that the walls of the corridors, instead of corresponding with those underneath, are placed across the vaults; there is consequently always a fear of danger, and constant repairs required. It is extraordinary that so great an architect as Sansovino should have fallen into such an error. He made a design for the bridge of the Rialto, which was not carried into effect, and is now lost.

Sansovino shewed his abilities in the church of San Geminiano, over the piazza of San Marco, and succeeded admirably in uniting the interior cornice of the arch in the chapel with the ornaments of the principal order in the church. This chapel was erected in 1505, from a model by Christofero del Legname, an architect and sculptor. Sansovino ornamented all the parts with such elegance and proportion, that this is considered the most beautiful church in Venice. He succeeded equally well in the façade, which is divided into two orders, with a beautiful door in the centre, and well proportioned windows in the lateral intercolumniations. With regard to the height, he had in view the old Procuratie, wishing this façade to be higher than the lateral buildings by the pediment of the attic. It is to be regretted that the buildings of the great square were not continued in two orders, according to the intention of Sansovino. Scamozzi added a third order, and the square is no longer surrounded by edifices of equal height.

In the ducal palace he built a staircase, which, although difficult of ascent, is nevertheless noble and majestic. In the church of San Fantino he erected a rich chapel, of the Composite order, with four majestic fluted columns supporting the arches, and an elegant cupola. He made a simple and elegant design for the sepulchre of the signor Podacataro, in the church of San Sebastiano. Above a solid basement are two grand columns, supporting an arch, with an entablature and pediment, and in the centre of the arch is placed the urn. That of the doge Veniero, in the church of San Salvatore, is still more beautiful; the order is Composite, and between the lateral niches are two statues by Sansovino, who was then eighty years of age.

The wonderful bronze gates in the sacristy of San Marco were designed by Sansovino, who introduced his own portrait, with those of Titian and Aretino, his two faithful friends. Such was the reputation of Titian and

Sansovino, that in an extraordinary tax raised by the senate, these two men alone were exempted, to shew the esteem in which they were held. This architect died at the age of ninety-one, and was buried in San Geminiano, He left a rich estate to his son, Francesco Sansovino, who rendered himself celebrated by his description of Venice.

Jacopi was fertile in invention, of a cheerful disposition, and noble in his aspect. His architecture was elegant and full of grace, but deficient in strength and solidity. He used the orders, especially the Doric and Composite, continually; his ornaments were exceedingly correct. He sculptured the members of the cornices, introducing bas-reliefs and statues; consequently adding much to the decoration and majesty of his buildings.

Scamozzi refers to a useful work, written by this architect, on the construction of floors, and particularly describing a method adopted by him to prevent the dust falling through the joints of the boards. This work is now lost.

GIOVANNI MERLIANO, OF NOLA,

(Born 1478, died 1559,)

INSTEAD of following the business of his father, that of a leather-merchant, he attached himself to drawing, and studied under Agnello Fiore, a Neapolitan architect and sculptor; and in order to improve his knowledge in these two professions went to Rome. On his return to Naples, he worked most indefatigably, and produced so many excellent pieces of sculpture, that his reputation became greater than that of any other Neapolitan sculptor. The

principal churches of Naples are adorned by his hand; but his best performances are the tombs of Andrea Bonifacio, in the church of San Severino, and of the viceroy Don Pietro di Toledo, in the choir of San Giacomo, belonging to the Spaniards.

He built the latter church, and that of San Giorgio, belonging to the Genovese. He reduced the Castle Capuano into a tribunal of justice; and although composed of two halls of such prodigious dimensions, they are not sufficiently large for the immense concourse of people who assemble there.

He principally directed the festivals in honour of Charles the Fifth's triumphant return from Tunis. Over the piazza of the Porta Capuana was erected a triumphal arch, 86 feet high, 78 wide, and 45 deep, with three openings in front and one in each flank, decorated with double Corinthian columns, supporting a whimsical entablature, and enriched with paintings and sculpture, alluding to the actions of the emperor.

Giovanni da Nola made designs for the palace of the prince San Severo, and for that of the duke della Torre: they were magnificent and well arranged.

He also adorned La Punta del Molo with a fountain, in which was represented the four principal rivers in the world. He went, with many others, to Spain, by order of the viceroy Don Pietro Antonio of Arragona, to embellish his gardens.

He also had the arrangement of the magnificent street at Toledo, which would have been better had it continued in a strait line to the palace, intersected by three or four ample and regular squares.

This great artist added to his rare talents an excessive mildness of character; he was consequently universally esteemed, and lived tranquilly till his eighty-first year.

FERRANTE MAGLIONE AND GIO. BENINCASA,

NEAPOLITAN architects, and contemporaries with the last, erected under the viceroy of Toledo a variety of buildings, among them the royal palace, now called the old palace, and which ought not to be allowed to remain.

FERDINANDO MANLIO, A NEAPOLITAN,

Is supposed to have been a pupil of Giovanni da Nola, and distinguished himself in the great hospital and church della Nunziata, where is his epitaph. He opened the road to the Porta Nolana, built a royal casino, or summer-house, at Pozzuoli, and drained a number of marshes: all of which was by the order of the celebrated viceroy of Toledo. He also executed the regulations of the viceroy duke of Alcalà, by opening the noble road of Monte Oliveto, erecting palaces where there were originally only the gardens of monks. He enlarged the grotto of Pozzuoli, and built the bridge of Capua.

MASTRO FILIPPO, A SPANIARD,

RESTORED the famous cathedral at Seville, in 1512, one of the finest Gothic works, began in 1401. It is 420 feet long from east to west, 273 wide, divided into five naves,

surrounded by chapels. The vaults spring from thirty-two arches on each side. The whole is of Paonazzetta stone, and for a roof has one grand vault, surrounded by balustrades. There are eighty painted windows. However much we may be prepossessed in favour of the Grecian architecture, it is impossible on entering this church not to be delighted at the grandeur and simplicity with which every thing is disposed ; yet the original architect is unknown. It was finished in 1506 ; but in 1512 a pier gave way, and the whole became ruinous.

Mastro Filippo made it less lofty, and it is said more beautiful than at first.

GIOVANNI DE OLOTZAGA

WAS a native of Biscay, and about this time built the cathedral of Huesca in Arragon, on the site of the celebrated mosque of Mislegda. This work is much admired ; it has three stone naves, of good proportions. The principal façade is grand, with fourteen statues, larger than life, on each side the entrance, placed on pedestals within niches, and above these forty-eight smaller ones, a foot in height, variously arranged ; over the door is the image of the Virgin, with the adoration of the kings on one side, and the appearance of Christ to Mary Magdalen on the other ; the pediment contains a sort of altar, of a single stone, in which the architect has sculptured a representation of the whole temple most delicately.

Under Ferdinand " the Catholic," and Isabella, both attached to the fine arts, architecture changed its features in Spain, and the Gothic gave way to the Greek. In this style he built the great college of Santa Croce, at Valla-

dolid, began in 1480 and finished in 1492, the founding hospital at Toledo, founded by the cardinal Don Pietro Gonzales de Mendoza, and the great college of Sant' Ildefonso, founded by cardinal Ximenes.

PIETRO DE GUMIEL

Is thought to be the architect of Santa Engracia at Saragossa. The façade is of fine sculptured stone. In 1498 he began the college of Alcala, a sumptuous building in a mixed style. The whole is of stone, and divided into three ample courts: the first has a Doric portico, with arches, and two orders of galleries above, one having columns also Doric, the other Ionic; comprising in all ninety-six: the second court has thirty-two Composite columns, and between the arches are some fine heads: the third court has thirty-six Ionic columns, beyond which is the theatre. The church has Ionic columns, richly sculptured. Here is the monument of cardinal Ximenes, the founder, considered one of the grandest in Spain: it is by Vergara.

GIOVANNI ALONSO

BUILT the Sanctuary of Guadalupe, before which is a spacious vestibule, raised on a number of steps, serving as a base to the façade, which consists of five lofty Gothic pilasters, with arches between; two of these are open for

the entrance. The interior has a chapel, in the style of a portico, from which is the ascent, by twenty steps, to the magnificent temple. Immediately on entering is a tablet, with this inscription :—

A qui yace Juan Alonso Maestro que fizo esta Santa Iglisia.

The church consists of three naves, divided by clusters of columns, with three arches on each side. The addition of the choir has deprived them of much of their majesty, by concealing one of the side arches. The great altar is by Giovanni Gomez de Mora. It has four floors; the three first have each eight Corinthian columns, and the last, at the top, four. The greater part of the rich vessels and furniture are the work of Giovanni di Segovia, a monk of the same church, and the finest goldsmith of Spain.

FRA GIOVANNI D' ESCOBEDO

WAS born in the mountainous part of Spain, and educated at Segovia. Being learned in geometry and architecture, he was commissioned to repair the famous aqueduct of Segovia, a Roman work, which had fallen to decay. The queen Isabella, who was equally attentive with her consort to preserve the ancient edifices, employed another, friar Giovanni, a monk of St. Geromino del Parral, to conduct and distribute the water in the city of Segovia. But how poor are these works when compared with those of the ancients. The whole consists of three bridges, more useful than magnificent.

GIOVANNI CAMPERO,

By order of the cardinal Ximenes, erected the church and convent of San Francesco at Fordelaguna, his native country; but the building was scarcely begun when the architect abandoned it for a work of greater fame and profit, the cathedral projected at Salamanca. He was, however, obliged to return and continue his first undertaking. In consequence of the cardinal's haste and his own, which was, perhaps, greater, one wall was raised out of the perpendicular, and fell. The cardinal excused this misfortune, as one not uncommon even with the best architects. The work was completed, with the addition of an aqueduct.

The style between the Gothic and the Greek was continued in Spain during the greater part of the reign of Charles V.

GIOVANNI GIL DE HONTANON

MADE a design for the cathedral of Salamanca, which was submitted to the consideration of the four most able architects in Spain, Alonso de Cobarrubias, the architect of the church at Toledo, Mastro Filippo, of that of Seville, Giovanni di Badajos, of that of Burgos, and Giovanni Baleso, by whom it was approved and commended.

This church is 378 feet long, and is divided into five naves; the centre one forming a Latin cross, 50 feet wide and 130 high; the side aisles are 37 feet and a half wide and 88 high; the others are divided into chapels, 28 feet

wide and 54 high; the columns of the nave are 3 feet in diameter, and those of the transept 12. The whole is vaulted, and of square stones, with a large tower of the same material.

Rodrigo Gil, son of the above-named architect, had the execution of it, and began it in 1513. He was, however, greatly interrupted by some objections of the chapter; and on its being referred to Philip II., they were ordered to abide by the decision of Giovanni di Rivera Rada, an architect of great fame.

It was, perhaps, this Rodrigo who, in 1525, erected the church of Segovia, very similar to that of Salamanca, except that it is more simple, and more in the Greek style.

The cathedral of Segovia, which in size and majesty is equal to those of Toledo and Seville, was begun in 1525 by Rodrigo Gil de Hontanon, who had the direction of it till 1577; it was then carried on by Francesco de Campo Aguero, who died 1660, and to whom succeeded Francesco Biadero, who died 1678. At one end of the church are the stone sepulchres of the three above-named architects, mentioned by D. Antonio Porz, in the tenth volume of his Travels in Spain, published 1781. The Signor Ponz observes, that Hontanon must have been a clever architect, and well acquainted with the Greek and Roman style, which in his time was beginning to revive; but that, like many other artists, he was obliged in some measure to humour the taste of those who employed him, he therefore adopted the Gothic style, without the ornaments and details. All the cathedrals of this class are considered by the above author to resemble a theatre, and that where the Romans in their circuses placed the spina, are the choir and larger chapels. We have no sufficient documents to prove whether this opinion be correct.

The principal altar has been lately adorned, at the king's expense, by a design of Sabbatini, who has erected four

Composite columns, with bronze capitals, and some statues and angels. The church has three naves, with a variety of chapels within, containing many fine specimens of art. One lateral door is of excellent architecture, consisting of two parts; the inferior has two Ionic columns on each side, with niches between, and the superior Corinthian columns, and the statue of the protecting saint. This is considered to be the work of Giovanni di Herrera, or of Francesco de Mora. The façade is magnificent, not loaded with ornament, and the small embattled pyramids are of a good proportion. There is a cupola in the centre, between the great altar and the choir.

PIETRO DE URIA

CONSTRUCTED the bridge of Almaraz, over the Tagus, a few miles distant from Plasencia, a work which may vie with the boldest efforts of this description. Two large Gothic arches form the bridge, 580 feet long, 25 wide, and 134 high. The opening of one arch is 150 feet and a half, that of the other 119. The piers are lofty towers, and that in the centre stands on a high rock. Another pier has a semicircular projection between the arches, forming a piazza at the top. On this is an inscription, importing that the work was erected in 1552, at the expense of the city of Plasencia, under Charles V., by Maestro Pietro de Uria.

of extremely ancient origin, founded, in 587, under king

ENRICO DE ARPHE,

A German, who preserved the taste of the German architecture, which he evinces in his works, both in gold and silver, and especially in the treasuries of Leon, Toledo, Cordova, and many others in various parts of Spain.

He was father of Antonio, and grandfather of Giovanni de Arphe, the author of that useful work, "De Varia Commensuracion." He was also a poet, and author of a work comprising the rudiments of drawing.

ALONZO DE COBARRUBIAS,

IF not born, resided at Toledo, where, by his wife, Maria Gutierrez, he had many sons; among whom, the most celebrated was Don Diego Cobarrubias, bishop of Segovia, counsellor of state, and president of Castile, who attended the council of Trent, accompanied by his brother, Don Antonio, auditor of Grenada, and afterwards counsellor of Castile and magistrate of Toledo.

Alonzo first introduced Roman architecture, which was firmly established in Spain under Charles V., whose continual journeys to other countries contributed much to this fortunate event. Good taste had then awakened in Italy, it was thence transported to Spain, which at that time gave laws to Europe. We shall, however, see that this was but of short duration.

Cobarrubias was the architect of the church of Toledo; of extremely ancient origin, founded, in 587, under king

Flavio Reccaredo: it was afterwards converted into a mosque, and subsequently changed to a church, under San Fernando, and rebuilt by one Pietro di Pietro, who died 1328. This temple is in the Gothic style, magnificent and well-proportioned, 404 feet long and 203 broad. The highest of its five naves is 180 feet, with eighty columns, or clusters of columns. The façades are highly ornamented, with a tower 284 steps high, which is 20 feet in the opening, and as many in thickness. The various riches collected in this temple are supposed by some to be worth more than the whole of Toledo.

In the same city Cobarrubias erected the façade of the Alcázar, or royal palace. The interior vestibule is a mixture of Gothic and Greek. It was begun under Alphonso VI., 1085, and finished under Charles V. by one architect, who erected a superb façade and vestibule, embellished with columns. The door has two Ionic columns, with an ornament above, over which are two others, placed over the opening, with a pediment. The windows are also ornamented with columns, attached to the wall, and triangular pediments. This edifice suffered much from the English troops at the beginning of this century, but it has been restored latterly under the archbishop, by the architect Ventura Rodriguez.

At Valentia, where the duke of Calabria D. Fernando of Arragon resided, Cobarrubias built the monastery and temple of San Michel de' Re, of the order of San Girolamo; a work of great magnitude, in which also Vidanna, and afterwards Martin d' Olindo, assisted.

DIEGO SILOE,

A native of Toledo, and assistant to Cobarrubias in the restoration of good taste in architecture. He built the cathedral of Grenada, with the monastery and church of San Girolamo in that city. The cathedral has three naves, of a disproportionate height. The Corinthian order is defective in its height, and the capitals, members, and sculptures, are too fanciful: the cupola is beautiful and magnificent.

The great chapel of San Girolamo, with the royal monastery, founded in 1496, is one of the finest in Spain. It was obtained from Charles V. by the duchess of Terranuovas, Donna Maria Maurique, wife of the famous captain Gonsalvo Fernandez of Cordova, for a private chapel, and Siloe adorned it with a Corinthian order, but in a barbarous style. The cloister is graceful and well arranged.

To Siloe is attributed the royal hospital, and some other edifices: but both Siloe and Cobarrubias made the value of their buildings to consist in loading them with sculpture, from an idea that beauty and richness were synonymous. Many modern architects are of the same opinion.

DAMIANO FORMENT,

AN architect and sculptor of Valenza, erected the façade of the church of Sant' Engracia of Saragossa, 60 feet wide and 105 high, entirely of alabaster, divided into four orders of columns, with statues larger than life within niches.

He also made the altar screen, of alabaster, of the cathedral of Huesca ; it is divided into three orders by three historical subjects, executed in alto-relievo: it was began in 1520, and finished in 1533. It is not known whether he erected any entire buildings, he is only named as designing and executing ornaments.

MARTINO DE GAINZA,

THE architect of the royal chapel of Seville, which is overcharged with ornaments. It was continued by Ferdinando Ruiz, and finished in 1575 by Alonzo de Meyda. The building is of hewn stone, of the Composite order.

ALONZO BERRUGUETTE,

(Died 1561,)

A sculptor, painter, and architect, was born at Paredes de Naba, near Valladolid. He went to study in Italy in 1500, and was at Florence when Michael Angelo and Vinci exhibited their cartoons, which produced an immense number of artists, among whom was Berruguette.

Charles V. was desirous of having him for his architect, and honoured him with the order of the golden key. It is thought that he designed the palace of Madrid, which was begun by Henry II., continued by Henry III., and most sumptuously rebuilt by Charles V., but it no longer exists.

Berruguette erected the gate of San Martino, which is the principal entrance to Toledo; it is of the Doric order, with the royal arms on the exterior, and a statue of Santa Leocadia in the interior,—an elegant and simple work. To him is also attributed the palace of Alcala, belonging to the archbishop of Toledo, a grand building, though defective in some parts: a great portion also of the cathedral of Cuenca is said to be by him; not the façade, which is of a bad taste, and erected, 1669, by Giuseppe Arroyo, and afterwards continued by Luigi Arriaga. The cloister is grand, from the variety and multiplicity of the ornaments, which are well executed. The great altar of the church and the chapel, called the *Trasparente*, designed by Ventura Rodriguez, have both much merit. Finally, it is thought that Berruguette had some part in the Pardo, which was rebuilt in 1547, where is still allowed to remain, notwithstanding the additions by Philip II., the miserable eastern and western façades,—the porticoes of Ionic columns, with their low stone arches. The windows are too far apart, and too small in the inferior story, the stairs are also difficult to ascend; yet, with all these defects, the edifice is well arranged and executed.

The taste of Berruguette is most conspicuous in the architecture of screens and altars. In the arrangement of the orders, he followed the bad style of employing them all, one over the other. He was, however, learned, and well acquainted with each.

His principal merit was as a sculptor, and he was considered the first in Spain. Toledo is full of his works, and those of his contemporary, Philip of Burgogna. His last was the marble sepulchre of the cardinal di Tabera, in the church of his great hospital at Toledo, where the artist died extremely rich, from the profit of his works.

PIETRO DE VALDELVIRA,

BETWEEN the years 1540 and 1556, built in Ubeda the famous chapel del Salvatore, by order of the commendator Don Francesca de Los Cobos, for whom he also erected a palace. Both these buildings are profusely ornamented. It is uncertain what he did in the church of Gaen, for which he gave the design.

In 1562, he built the hospital and chapel of San Giacomo in Baeza, which is considered one of the best buildings in Andalusia.

PIETRO EZGUERRA,

(Died 1561,)

A native of Ojebarr, near Perayas, the architect of the churches of San Matteo de Caceres, of Robledillo, near Plasencia, of Malpartida, and the cathedral of Plasencia; all considerable works.

The church of Malpartida has an imposing façade, though of two orders; the first has four columns, with statues in the centre, the second has two, flanked with vases, and terminated with candelabræ of good design. The whole is of granite. There is also a façade within, which resembles the Gothic, being of three orders, with a number of sculptures, among which are many of satyrs. The interior has a grand nave, also of granite, with Corinthian columns in the choir.

On the death of Pietro, his son, Giovanni Ezguerra, a Dominican friar, continued these buildings, and after him Giovanni Alvarez finished them, in 1574.

The cathedral of Plasencia has two façades, that of the north, of granite, and of three stories, two with columns, and the last with pilasters, with a multitude of whimsical ornaments, and flanked by two lofty and highly ornamented towers. The other façade is a little less whimsical. The interior is one great nave. The great altar is of three orders, all Corinthian, each having eight columns, oppressed with statues and bas-reliefs; the principal of which are by the famous Gregorio Hernandez. The choir is most extravagant, being covered with sculptures, the subjects of which are both improper and ridiculous,—animals, and a variety of fables.

The style of these two edifices is the modern Gothic, and they would have retained the first place among those of their kind in Spain, had they been finished by the original architect; but from the length of time they employed in building them, a variety of absurd changes were introduced.

FERDINANDO RUIZ,

BORN at Cordova, was the principal architect of the church at Seville; where he executed a number of things; the most noted was that of enlarging the great tower, called Giralda.

Some suppose that this singular edifice was began in the 11th century, Bernebet Almucamas being king of Seville: the idea was given by the architect, Geber, a native of Seville, to whom is attributed the invention of

Algebra, and the design of two other similar towers;— the one at Morocco, the other at Rabata. This tower was at first 250 feet high and 50 wide, without any diminution; the walls are 8 feet thick of square stones, from the level of the pavement; the rest is of brick for 87 feet.

The door is so small, that it will barely admit one person. In the centre is another strong tower, higher than the exterior one, and 23 feet thick. The interval between the two towers is 23 feet, and serves for the ascent, which is so convenient, that two can mount it on horseback. The centre tower does not diminish, but as the exterior increases in height the walls widen internally, so that the ascent narrows, and will only admit one person. The windows are carried up, conformable with the ascending inclination, but appear level on the exterior. Every window has three columns, and in the whole tower there are 140, of various marbles. The entablature was crowned by four large globes of gilt bronze, one over the other, so resplendent, that when the sun shone on them they were visible for eight leagues. When the Moors of Seville negotiated their surrender to San Ferdinando, who had besieged the city sixteen months, one of their conditions was, that this tower should be destroyed; but Don Alphonso, eldest son of the king, replied, that if one brick of it was touched, not a man should be left alive in Seville. In the destructive earthquake of 1395 the globes fell, in which state it remained till 1568, when the chapter ordered Ruiz to raise them 100 feet higher.

He divided the 100 feet into three parts, with a small cupola or lantern at the top; the first division is of the same thickness as the tower, on a plinth of 3 feet, and six pilasters on each façade, with five windows: over these is an entire entablature, with balustrades: the second is narrower, with the same ornament above: the third is octagonal, with pilasters, over which rises the cupola,

surmounted by a bronze statue of Faith, vulgarly called La Giralda.

By this work, Ruiz acquired the fame of being an ingenious architect, particularly with regard to its solidity. In fact, notwithstanding the frequent earthquakes, the Giralda still remains secure.

A tradition is preserved in Plasencia, that the artificer of the choir to the last-named cathedral, thinking he had performed a chef-d'œuvre, said, that not even God himself could do better. For this expression he was confined in a tower, from which he thought to escape by means of wings. He ate little to make himself lighter, and only birds, that he might acquire their natural elasticity, and at the same time he observed the quantity of feathers necessary for each wing. He weighed every bird, both before and after it was stripped of its feathers, and preserved the latter; and after much reflection he found, that for every two pounds of flesh four ounces of feathers were requisite. Overjoyed at this discovery, he anointed himself all over with some gum, covered his body with feathers, and with two large wings in his hands threw himself from the top of the tower, and with great address fell down dead in a meadow. When this flight, as it is termed, happened, or in what nest this wonderful bird was hatched, it signifies little to know; there is scarcely a tower to which some such story is not attached. But if our artificer could not imitate Dædalus in his flight, he certainly has surpassed him in the choir, which is more intricate than any labyrinth.

GASPARO BECERRA

(Died 1570.)

WAS born at Baeza, in Andalusia, studied at Rome, and acquired the commendations of Vasari. On his return to Spain, he exercised the three arts in the screen of the cathedral of Astorga, and in the church of the Scalze Reali of Madrid he erected the great altar, with two orders of columns, the first Ionic, the second Composite, with a pediment, and a variety of sculptures much admired. He was also a sculptor and painter, but as an architect he only practised in the ornamental parts, in which he succeeded even better than Berruguette.

MACHUCA

BUILT the royal palace of Granada, entirely of wrought stone, by order of Charles V. The principal façade is rustic, with three large gates, and eight Doric columns on pedestals, sculptured with historical bas-reliefs.

The second story is Ionic, with eight columns, and above them pilasters. The internal vestibule is circular, with a portico and gallery, on columns of the same order: the architraves are one single piece of marble. It is to be regretted that there are arches springing from the columns. The rest of the work is well arranged; the vestibule especially is of good proportions, and ingeniously managed.

DOMINICO TEOTOCOPOLI,

(Born 1548, died 1625,)

SURNAMED *Il Greco*, on account of being born in Greece. He was a disciple of Titian, and became a good painter; but he neglected the art, to avoid the imputation of imitating Titian in his extravagancies. He died at Toledo, at the age of eighty, and had two celebrated pupils called Tristan and Mayno.

Il Greco also practised sculpture and architecture at Madrid. He built the college of Donna Maria d' Arragona, a regular building, and without ornament. In Toledo, the Dominican church and convent; and a house in that city, called *Ayuntamiento*, which is a delicate and elegant piece of architecture.

The church and hospital, *della Carita*, at Illesca, between Madrid and Toledo, is of his design; beautiful, imposing, and magnificent. It is disfigured by a species of balcony, with balustrades, which runs from the great chapel to the transept, cutting the Corinthian pilasters. This appears to be placed for the purpose of supporting fifty silver lamps, as if in these the magnificence of the church consisted. Lamps certainly are as necessary in churches as the glow-worm is to the day. There are six altars, each having two Doric columns. The great altar has clustered Corinthian. In this church *Il Greco* painted the picture of Sant' Ildefonso, and sculptured two statues of the prophet.

But his grandest work was the church and monastery of the Bernard monks of San Dominico di Silos. The whole is by him;—architecture, painting, and sculpture.

GARZIA D' EMERE,

IN 1594, built the parochial church of Valera, near Cuenca, the façade of which has four Ionic columns, on pedestals, with a balcony ornamented with statues. The church is Gothic, but the great altar is in another style, having four Composite columns, with as many Corinthian ones above them.

BARTOLOMMEO DI BUSTAMENTE,

ALMONER of the cardinal Giovanni de Tayera, archbishop of Toledo, was the architect of the hospital of San Giovanni Battista, founded in 1545, by the archbishop, near Toledo. His design was approved by Ferdinando Gonzales, de Lara, and by Vergara, both architects of the church of Toledo. The court has porticoes of Doric columns, supporting arches, with a loggia of Ionic columns; in all 112, and all of granite.

From the centre of this sumptuous court we enter the church, which is well-proportioned, and in a light and elegant style.

GIOVANBATISTA, OF TOLEDO,

(Died 1567,)

AN architect and sculptor of great merit, well versed in philosophy, mathematics, and the belles lettres, and endowed with all those qualities which Vitruvius considers necessary to form a good architect.

After having studied at Rome he visited Naples, being sent for by Don Pietro di Toledo, the viceroy, who employed him as architect to the emperor Charles V. in many important works in that capital. Among others, are the magnificent strada di Toledo, the church of San Giacomo degli Spagnuoli, a magnificent palace at Pozzuoli, or rather at Posilipo, a number of fountains, and other ornaments, which acquired Giovanbatista so much fame, that he was nominated by Philip II. architect to all the royal works of Spain, and of the Escorial, which that monarch wished to erect in the most sumptuous manner. For this purpose he left Naples in 1559, and removed to Spain. But his wife, Orsola Jabarria, who embarked afterwards, was shipwrecked and perished, with her daughters, and the immense riches acquired by Giovanbatista; who, in addition to these terrible losses, had to carry on a lawsuit with his father-in-law, Girolamo Jabarria, who required the restitution of his daughter's marriage portion.

The only architect who gave the design for the superb façade of the Escorial was Giovanbatista di Toledo. He commenced the work in 1563, as is clearly shewn by

a stone in the portico of the church, with this inscription : —

Deus. O. M. operi. aspiciat
Philippus II. Hispaniarum. Rex.

A fundamentis erexit

1563,

Joan. Baptista, Architectus,

9. Kal. Maii.

He continued to superintend the building during his life, and died at Madrid in 1567. He was succeeded in this great undertaking by Giovanni d' Herrera, his pupil, who finished it. They are, therefore, unacquainted with the subject who attribute this work to Luigi de Fox, to Bramante, to Peregrino, to Vignola, and to other architects, who may, perhaps, have given some designs, but which were not selected.

There have been numberless other fables with regard to this edifice: as that it had 11,000 windows, 14,000 doors, double the real number,—800 columns, whereas there are not above 200,—that the royal arms are on a rare stone brought from Arabia, though quarried in the neighbourhood,—that twenty-five millions of gold were spent, when, in fact, it cost a little more than six millions of ducats,—that the roof of the church was painted by Titian, in fresco, though it is by Luca Giordano,—that the windows of the library are of crystal, with frames of gilt silver,—and that it contains 100,000 volumes, which may be reduced to 30,000, and the windows are mere glass, with lead frames. The Escorial requires no exaggeration; a simple and exact description is sufficient to convey an idea of its magnificence.

The motives which induced Philip II. to order the building of this structure were two,—the dying injunction of his predecessor, Charles V., who at that time was desirous of constructing a tomb for the royal family of Spain, and the other to erect a monument, certainly supe-

rior to any triumphal arch, to commemorate the famous victory of San Quintin, gained on the festival of San Lorenzo, to whose intercession the king supposed he owed his success.

A delightful situation was chosen, a few miles from Madrid, at the foot of the Carpentani mountains, which divide the two Castiles. This pile is composed of a magnificent monastery, which was given to the fathers of San Girolamo, so much beloved by Charles V. and Philip II., of a college, a seminary, and a royal palace; with the addition of a number of villages, gardens, fields, hospitals, country houses, and other buildings for various purposes.

The plan of this edifice resembles the form of a gridiron, alluding to the instrument of the martyrdom of San Lorenzo. The royal palace is supposed to represent the handle.

It is internally divided into fifteen courts, of various sizes, the largest are ornamented with porticoes and galleries. It contains more than eighty fountains. The whole building is of granite, both in the interior and exterior, taken from the Spanish quarries, and worked and joined with great ingenuity. The roofs are slated, in some parts covered with lead, particularly that of the church; the cupola is stone.

The eight towers, four of which are at the angles of the edifice, and the others between, form, with the cupola, a contrast, which contributes much to the magnificence of the edifice; an edifice which, from its long and erect façades, its unornamented form, and its peculiar materials, presents an aspect of solemn grandeur, corresponding with the character of the monarch under whom it was erected.

The principal façade, looking towards the west, is 740 feet long and 60 high, to the cornice, which continues, without interruption throughout. The towers at the four angles of the edifice, and which flank each façade, are 200 feet high. This façade, like the others, is divided

into five stories of windows, for the most part small, between horizontal and vertical string courses. Such a number of stories, together with 200 windows, cut the great mass into too many divisions. It has three doors, with decorations, one in the centre and the other two at the sides, each equally distant from the middle and the extremities.

The centre compartment is 140 feet long, and has two orders of columns, half attached to the wall. The lower has eight Doric semi-columns, on a plinth; in the centre intercolumniation is the door, and niches in the others. The superior order has four Ionic columns, on pedestals, corresponding with the four inferior Doric columns. Over the Ionic is a triangular pediment, with globes at the three points; which same ornament is attached to every other pediment, as well as to the towers.

In the centre of this Ionic order is a niche, containing the statue of San Lorenzo, sculptured by the celebrated Giambatista Monegro, by whom are the statues of the portico of the church; and it is asserted that these seven statues are from one block of stone. It is also flanked by four obelisks, with globes at the top. The decoration to the other doors consists of a niche and pediment.

The façade opposite to the east is 1100 feet long, and from the projection, which forms the palace and the great chapel, contains 366 windows; the whole receives additional magnificence from the chapel, which, with its cupola and pediment, forms a back-ground.

The south side, looking towards the gardens, is 580 feet long, with 306 windows. The north side has three doors, two of which open into the palace and one to the college. The palace has no large doors, the entrance is only through these side ones, and along narrow passages, which lead to the staircase. Philip II. was so good a servant of God, that he wished the royal palace to be

nothing when compared with the monastery, and other works consecrated to his service. In fact, a great part of the court lodged in the cells.

On entering the middle gate of the façade of the west, is a portico or vestibule, dividing the monastery from the college. This vestibule is 30 feet wide and 84 long, ornamented with pilasters, supporting arches and openings, with a gate at each extremity, and a window above. From thence three grand arches lead into the king's court, 250 feet long and 136 wide, surrounded by habitations of five orders of windows, ornamented with pilasters or fascies. At the end of this court is the temple; previous to approaching which, and over the vestibule, are the libraries, with a façade, corresponding with the principal exterior, ornamented with pilasters.

The approach to the temple is by seven steps, which gives it a more lofty appearance; and on this basement is a beautiful Doric porch, of five arches; the three in the centre project forward, with semi-columns, with which those of the extremities are united.

The three arches lead to the church, the other two to the monastery and the college. Between the arches and the cornice are as many windows. Over the entablature, and plumb with the columns, are a number of statues in stone. Behind this porch rises the façade of the church, the windows of which correspond with the inferior ones, and above a large window arched, which cuts the cornice of the pediment very awkwardly. This façade is flanked by two towers, for bells, clocks, and chimes; which towers form a part of the monastery and college, and are ornamented on the most prominent parts with pilasters, between which are windows and niches, with parapets, balustrades, and globes, terminating in small cupolas; over which are obelisks, globes, and crosses.

The interior of the church is Doric; the principal nave

is 53 feet wide; the smaller ones can scarcely be called such, being, in fact, nothing but mere passages, in which are chapels, 30 feet wide: the whole length is 364 feet, width 230, and the height 170. It is divided and supported by piers, 53 feet distant from each other, and 30 feet in circumference. From the piers, which have their pilasters channeled, like those on the walls, spring arches; in all 24. On the opposite side are two niches, also corresponding with those on the walls, and under these are the chapels, with the altars; amounting in all to forty-four. From the centre rises the cupola, of a good form; but in the interior, instead of having a cornice with a balustrade, it has bands, badly united. Its diameter is 66 feet, and the exterior circumference 295. The height from the pavement to the cross is 330 feet. Its exterior is ornamented with a drum, which has a parapet with balustrades, and Doric columns; in the intercolumniations of which are eight windows, with as many niches and recesses above. Over the cornice is another balustrade. The dome is divided into fillets, or ribs, correspondent with the columns; the lantern has also eight windows, and at the top a pinnacle, with the ball and cross. If the plan of Giovanni d' Herrera had been followed, namely, to raise the basement of the cupola 11 feet higher, it would have acquired a more advantageous elevation.

The choir is not more than 30 feet high, the pavement of which is level with that of the church. It is like entering a grotto. What a subject of regret, that an intelligent architect should yield to the absurd caprices of others! The whole length of the choir is but 60 feet.

Among the most valuable things in this church is the tabernacle, built by Giovanni d' Herrera, like a small circular temple, formed by eight Corinthian columns, of red jasper, with statues and other riches in gold and gems, worked by Giacomo Trezo, a Milanese, and celebrated

goldsmith. It is a pity that this beautiful morceau, as well as all the other ornaments of the altar, are not seen from a sufficient distance; there is a want of light, and the work is too minute.

The sepulchres of Charles V. and Philip II., with their respective families, are also magnificent. The presbytery is raised on a number of steps, and forms another superior church, which has no relation with the first, and takes much from the design.

Between the church and the ante-sacristy, is the magnificent staircase which leads to the Pantheon. I know not why this title has been given to the sepulchre of the kings of Spain. The staircase has fifty-nine steps, with a landing in the centre, where there is a view of Doric columns supporting an open pediment, to receive the arms of Spain. At the sides are two bronze statues, one of Human Nature, stripping herself of the illusions of the crown and sceptre, *Natura occidit*; the other of Hope, *exaltat spes*. The whole of the staircase and partitions are of marble and metal. In the two inferior landings are two doors, one leads to the vault where are the Infants and Infantas, and those queens who had no issue; the other to the sepulchral chamber of the kings, which is circular, 36 feet diameter, 38 high, encrusted with various coloured marbles, between gilt metals, ornamented in the interior with sixteen double Corinthian pilasters, on pedestals. Between these pilasters, which form a sort of octagon, are the niches with the urns, amounting to twenty-six; that is, four in each of the six sides, and two over the door; opposite to which is the altar of the Resurrection, rich in stone, metals, and sculptures. The whole building is really sepulchral, from its want of light. The architect of this Pantheon was not Giambatista Crescenzi, a Roman, who only added the little light it has. It was one Frataccio, who endeavoured to make it rich, without

any regard to beauty. The whole of this work may be considered a specimen of the reigns of Philip IV. and Charles II.

Among the other cloisters attached to the monastery is that of the Evangelists, with two orders of arches; the inferior of Doric columns, attached at the base, and the superior of Ionic: there are eighty-eight arches, crowned by a balustrade, with globes on the pinnacles. In the centre is a small isolated octangular temple, covered with a cupola, with four arches and four landings, ornamented with Doric columns; between which are four niches, with the four Evangelists, which has given the name to the cloister: over the entablature runs a balustrade. The exterior is of the same granite, but the interior of the little temple is of jasper. From each of the four landings in the basement rises a fountain, which flows into a vase of marble, surrounded by a balustrade. The rest of the cloister is divided into beautiful parterres. This temple, which is 30 feet in diameter, and equal in height to the façade of the cloister, is, however, crowded, and badly placed.

The college, the seminary, the royal palace, comprehend the rest of the building. The whole is copiously ornamented, particularly with paintings, from the best masters of Italy, Flanders, Spain, and Germany. There is also a collection of the best works of Da Vinci, Michael Angelo, Raffaello, Corregio, Rubens, and Titian, with a variety by other celebrated painters. Indeed, it would be difficult to find so valuable a collection elsewhere.

The adjacent buildings are worthy of this august pile. Attached to the monastery, by an arched way, is an edifice called the Campagna, which has two galleries, one with Doric, the other Ionic columns, each 100 feet long and 20 wide. It was built by Francesco de Mora, successor to Giovanni d' Herrera. The cloister annexed to it is entirely surrounded with Tuscan pilasters and arches.

Here are the hospitals, granaries, pantries, and various offices. Here are also gardens, which appear hanging, being on the acclivity of a hill, the ascent to which is by steps curiously placed at various distances. At every step some new beauty attracts,—fields, bowers, flowers, fountains, niches, and rustic seats. The garden on the south side of the monastery is 8000 feet in circuit.

Adjoining to the eastern and northern façades is a spacious gallery, or esplanade, surrounded by a parapet; the entrances being similar to those of the edifice.

Here are the offices, the quarters for the guards, the riding-school, the aqueducts, &c. It is to be regretted that the distant hills are without trees, — a defect common in Spain, and which could be easily remedied.

Beyond these outer buildings is the lovely Fresneda, to the east of the Escorial, half a league from the monastery. This villa, entirely surrounded by a wall, contains courts with Tuscan columns, gardens, meadows, fountains, trees of every kind, and especially the ash, which has given it the denomination of Fresneda; lakes, with small islands; supper-rooms, fisheries, meadows, bowers, and rivulets. Here is also a church by the famed Francesca de Mora, the whole of wrought stone, and, although unornamented, is magnificent in its proportions.

In 1773, a number of other works, both public and private, were set on foot, and carried on with great activity, both for convenience and pleasure,—streets, houses, squares, theatres, palaces for the Infants Don Antonio and Don Gabriele; the whole designed by the Signor Villaneuva, architect to the Escorial. The interior of these works is well arranged; and the exterior corresponds with the ancient structure. The whole has a grave appearance; nothing light is allowed. A spacious road leads to Madrid, but it is destitute of trees, which it is worthy of, as well as that of Aranjuez.

From the time of Philip II., all his successors have

made some additions to this superb edifice, which, like the others, contain great beauties, with many defects.

Philip II. passed much of the latter part of his life in retirement within this edifice, and but little more was required to give him the appellation of a saint. The archbishop of Toledo composed a eulogium on his virtues, in heroic verse, and also attributed to him miracles; in fact, few saints can boast of more than are ascribed to him.

Notwithstanding the order of chronology, we must continue our description of the buildings of Spain.

GIAMBATISTA MONEGRO,

A sculptor and architect of Toledo, a pupil of Berruguete. He studied at Rome; and, by order of Philip II., made six statues for the portico of the Escorial. To him are also attributed the architecture and sculpture of the Evangelists, which are in the gardens of the cloister of the aforesaid edifice. Palomino says he died in 1590, although in 1600 he built the chapel of the Sacrament at Toledo; confounding him with Giambatista di Toledo, first Architect of the Escorial.

GIOVANNI D' HERRERA

(Died 1597,)

Was born at Movellar, in the Asturias, and was a disciple of Giambatista di Toledo, and his successor in the royal fabric of the Escorial. He was nominated the royal architect, and cavalier of San Giacomo.

He gave designs for the church, of the order of San Giacomo, near to Veles, not far from Cuenca; which, although destitute of ornament, is consistent and of good proportion.

At Madrid, he erected the bridge of Segovia, in the same massive and grave character with the rest: it has nine arches, with corresponding divisions. The whole is of granite.

Herrera was also the first architect of the royal pleasure-house at Aranjuez. It was begun under Philip II., was continually embellished by the other Catholic monarchs, and furnished with every thing convenient and sumptuous by Charles III. In the centre of the gardens, and in the most delightful situation, rises the palace, with its four beautiful fronts.

The original plan was a square, with a court in the centre. At various times there have been added two flanks, which run in a right line with the side fronting the square, and from these flanks project two large wings. These were finished in terraces, each of which has three porticoes under them, from whence continues a series of fluted pilasters, which form the entrance.

The body of the building has a decoration in the centre, which, in the lower part, has five arches, forming a portico, then seven windows; over the rest of the edifice there rise pyramidically seven others, with an attic, ornamented with sculpture, and crowned with a circular pediment, flanked with balustrades, and terminated by three statues. The order of the first story is Tuscan; that of the second is Doric, with a plain frieze; these two orders are carried throughout the edifice. The third, in the centre decoration, is Ionic; the fourth, in the attic, is Corinthian. The wings have also in their centre a decorated attic, which harmonises well with the principal part, and the two cupolas at the flanks. The whole of the edifice is occupied by two stories, a ground-floor and a

state one; the centre part only has three stories. The windows of the first floor are inserted in arches, which have a very fine effect. The upper ones are ornamented with triangular and circular pediments alternately; the others have small cornices. In the fronts of the wings the pilasters are double. The pedestals under each pilaster spoil the effect. Above the whole runs a balustrade, with balls.

The interior is magnificently distributed, ornamented with porcelain, other rarities, and with pictures by Gior-dino, and the sublime Mengs.

This royal house is preceded by an elliptical piazza, entirely covered with verdure, from whence proceed walks planted with trees, one of which leads direct to Toledo, across piazzas of circular and various other forms, exhibiting on each side beauties of every description. Others lead to woods, gardens, and the Tagus; and not far from thence is a circular piazza, from whence are seen ten verdant walks.

At the back of the palace are parterres, fountains of every sort, gardens, lakes, fisheries, sculptures, and many detached buildings. From this part also are a variety of walks, planted with trees, extending many miles; and although in strait lines, are diversified by different piazzas, elegant country houses, small temples, porticoes, supper-rooms, gates to embark on the river, on which are bridges and islands. In the evening these walks are illuminated, and exhibit, at one view, numberless beautiful vistas. It is perfect enchantment: plains, hills, and valleys, rivers winding amidst cultivated fields,—a continual rivalry between art and nature. This is the most delightful spot in Spain. The greater part of the sculpture is by Algardi. The beauties of art are here profusely scattered; and the whole have been exhibited to the public by means of the superb drawings by Don Dominico d' Aguirre, captain

of infantry and engineers, and engraven by the most able artists; since which, there has been published a large volume of all the royal seats at Aranjuez, accompanied with ten of the finest views. It is to be hoped that the whole will be added.

ANTONIO DEL REY,

A disciple of Giovanni d' Herrera, was appointed to construct the college of Valenza, towards the close of this century, by order of the archbishop, Giovanni di Rivera, patriarch of Antioch. The college is therefore called "del Patriarcha," or "del Corpus Christi." The church is decorated with Corinthian pilasters, 125 feet long, 55 wide at the transepts, and 30 in the body. The height is in good proportion, as is the whole. The great altar has six Corinthian jasper columns, and is enriched with sculpture and painting. It has a fine cupola.

The college has a court, ornamented at the lower story with Doric columns, on pedestals; and above, Ionic, with balustrades without pedestals. In the centre is a fountain, with an antique statue of Ceres. The internal entablature is crowned with a balustrade. There are eighty-six small and large columns; they belonged to the duke of Pastrana; some were from Alicante, and some from Carthage; originally, perhaps, from Italy. The staircase is magnificent.

FRANCESCO DE MORA,

THE successor of Giovanni d' Herrera in the Escorial, where he built a church, in the villa at the foot of the hill. It is entirely of wrought stone, and, although destitute of ornaments, has a grandeur which cannot fail to please.

At Madrid, he built the palace of de Los Consejos, the most superb edifice in that capital. Instead of having one large door in the centre of the façade, there are two in the flanks, with Doric columns; over which are windows, with pediments. He also improved the cloister of the convent of San Filippo il Reale, began in 1600, from a design of Andrea di Nantes. It is of granite, with two orders of porticoes, each with twenty-eight arches, supported by columns. In the centre is a marble fountain, which corresponds well with the whole.

GIOVANNI GOMEZ DE MORA,

ABOUT 1620, built the church and college of the Jesuits, at Alcala, a magnificent and well-proportioned edifice. The façade of the church is of granite, of two orders; one with pilasters, the other with Doric columns.

The great square of Madrid was built after his designs, in which the size and uniformity of the buildings are admirable. The royal house, called the Panaderia, has a portico of pilasters, with twenty-four Doric granite columns.

Mora also built the church and convent of the Franciscans, in Madrid, by order of Philip III., but it merits little praise.

To him is also attributed the royal convent of the Augustins, of Madrid; the interior of which was at first Doric, and afterwards converted into the Ionic by Ventura Rodriguez, who has also made some fine ornaments in the parish church of San Sebastiano.

GASPARO ORDONES

BUILT the parochial church of San Martino, at Madrid, in 1600. The façade has no other ornaments than string courses, square recesses, and pediments: the effect is good. The interior is Doric, which would be well enough, if not disfigured by the large openings of the chapels. The ornaments of the altar are barbarous.

GIAMBATISTA CRESCENZI,

(Born 1595, died 1690,)

A Roman patrician, of the noble Crescenzi family, lately extinct. His thorough knowledge of the fine arts induced Paul V. to entrust him with the superintendence of the pontifical buildings and paintings. He went to Spain with the cardinal Zapata, and was employed in the Pantheon, and some other buildings of the Escorial, where he conducted himself with so much dignity, that Philip II

declared him gentleman of the rooms, marquis della Torre, and cavalier of San Giacomo.

At Madrid, where he died, he built the court prison, the façade of which forms the greatest ornament of the street of Antocha. Over the door, which is in the centre, is a decoration of two orders of six Doric columns, on pedestals: those at the side of the door are double. Above is a pyramidal attic, with a pediment, ornamented with statues and other sculptures. The windows are rustic, and the building is flanked by two towers, which rise above the roof in the form of pyramids.

The work is massive, but not sufficiently so for a prison.

The house near the palace of the Buon Ritiro, is thought to be designed by him; it is well arranged, and enriched with the finest pictures of Giordano.

MARTIN DE OLINDO

BUILT the parochial church of Liria, in the rich façade of which the inferior story has four Doric columns, on pedestals, with niches, statues, and bas-reliefs; the second order has the same number of fluted Corinthian columns. It has a fine effect. In the centre is a cloud of angels, with the Madonna. The third order has two fluted twisted columns, with a statue of San Michele in the centre. The sculpture is passable, and the whole is of cut stone.

The monastery of San Michele of Valenza, began by Cobarrubias, was finished by Martin d' Olindo, who in the choir, as in every other part, wished to imitate the Escorial.

The façade of the church has three stories; the first, with six Doric columns, united at the extremities by statues: the second has Ionic columns; in the centre, corresponding with the inferior gate, is the statue of San Michele, in a niche, ornamented with small Corinthian columns: the third has Corinthian columns, some straight, some twisted; finally, a pediment, surmounted with the statues of the holy kings. It is all of hewn stone. The height is 65 feet. The interior of the church consists of plain pilasters only. It appears that this architect had no taste for architecture. The re-embellishments made afterwards are still worse. The pictures have some merit; they are by the celebrated Giovanni Ribalta.*

SEBASTIANO SERLIO, A BOLOGNESE,

(Died 1552,)

WAS a disciple of Baldassare Peruzzi,† and the first to measure and take designs of those ancient edifices, so elaborately described in the third book of his Architecture. In 1541 he went with his family to France, where he had been invited by the king, Francis I., who had previously given him many proofs of his generosity. Here he was employed in the Louvre, Fontainebleau, and le

* The lives of the Spanish architects, contained in this work, have been abridged from one compiled by Cavalier Don Niccola Azara, minister of Spain, resident at Rome.

† Vasari, tom. vi. p. 117.

Tourniille, and continued his treatise on Architecture. He preferred to his own design, for the court of the Louvre, that of the abbé di Clugny, and had the greatness of mind to advise its being executed. At the breaking out of the civil war, with its numerous train of evils, he retired to Lyons, where he lived most unhappily; became lame, and so poor, as to be reduced to sell some of his works and designs to Giacomo Strada. He afterwards retired to Fontainebleau, where he ended his days, esteemed by all for his learning in civil and military architecture, geometry, and perspective.

Serlio* is universally considered one of the most learned in architecture. He was devoted to Vitruvius, and shewed himself equally as well acquainted with theory as with practice. In the latter, he departed sometimes from the Vitruvian rules; his manner of profiling was hard, and his taste not excellent. He gave six diameters to his Tuscan columns; his cornice, in imitation of that of the Colosseum, is scarcely simple enough. To the Ionic he gave a base not sufficiently enriched. His Corinthian has only nine diameters, with too slender a capital. His Composite is in a still worse taste. He also coupled his columns. If the superb Malvezzi, at Bologna, is his design, as some pretend, the cornice might have been spared in each of the three orders, and that at the top only left.

* He published a work, entitled "Regole Generali di Architettura di Sebastiano Serlio, sopra le cinque maniere de gli edifici, cioe Thoscano, Dorico, Ionico, Corinthio, e Composito, con gli Essempi dell' Antichita che per la maggior parte concordano con la dottrina di Vitruvio."

JEAN GOUGEON AND PIERRE LESCOT

WERE both Parisians; flourished in the time of Francis I. and Henry II., and worked together in various edifices, especially at the Old Louvre and the Fountain of the Innocents.

Gougeon was so great a sculptor, that he has been called the Corregio of sculpture: his style was noble, majestic, and simple, and if not always correct, was at least always graceful. The Fountain of the Innocents is a masterpiece of sculpture; but the architecture is bad. The idea of a square tower, with windows between the pilasters, is certainly not one for a fountain. The situation, too, is very improper.

Gougeon built the palace of Carnavaler, and the illustrious Mansard, who finished it, suggested some of the plans. In the court is a Composite order, with a very rich frieze of figures of children amidst flowers; but, although well in relief, it looks confused at a distance.

A species of tribune, supported by gigantic caryatides, the work of this artist, is much esteemed. It is in the hall of the Hundred Swiss, at the Louvre.*

* *Vie des Fameux Architectes, &c.* par M. D'Argenville. Jean Gougeon, about 1550, undertook, in conjunction with J. Martin, to translate Vitruvius, for which he made many designs. Our artist was also skilled in the striking of medals.

FRANCESCA PRIMATICCIO, A BOLOGNESE,

(Born 1490, died 1570.)

HE commenced painting under Innocenza da Imola and Bagnacavallo, and, finally, under Giulio Romano,—all of the school of Raphael. He was called to France by Francis I.

Primaticcio was the first to introduce a good taste in painting and stuccoes, and also to extend, in some degree, the limits of good architecture. In 1540, he was sent, by the last named king, to Italy, to make purchases of antiques, and a number of figures which were cast in bronze, and collected at Fontainebleau. Besides the number of embellishments in that delightful castle, he gave a plan also for the palace Meudon, and a design for the sepulchre of Francis I. This sepulchre is like a small marble house. On a sub-basement, ornamented with bas-reliefs, a number of arches surround a species of tomb, supported by the figures of the king and queen. The taste of those times, on such subjects, was weak and trifling. Primaticcio was rewarded with the rich abbey of St. Martin di Troyes, and declared commissary-general of the royal buildings throughout the kingdom. Loaded with honour and riches, he was regarded as one of the first lords of the court, and all artists sought his protection, of which he was extremely liberal. Nicola da Modena, a painter and architect, practised in France under Primaticcio.

PHILIBERT DE LORME

(Died 1577.)

WAS born at Lyons, at the beginning of the 16th century, and at fourteen years of age went to Italy to study the antique. Marcello Cervino, afterwards pope Marcellus II., who had a great taste for the fine arts, patronised him. With a mind highly enriched, he returned to his own country in 1536, and exerted all his industry to strip architecture of her Gothic dress, and clothe her in that of ancient Greece. On going to Paris, for the cardinal du Belley, his merit was soon discovered by the king, Henry II., and his successors. He built a staircase at Fontainebleau, and made the designs for the castles of Sainte Maur, d'Anet, or Meudon, and rebuilt a number of royal houses. Queen Catherine di Medicis employed him to build the palace of the Thuilleries; a truly royal edifice, on which Philibert de Lorme displayed his most magnificent ideas. The ground floor is of fluted Ionic columns, singularly girded, on account of the length of the shaft, by five bands, whimsically sculptured. The pedestal on which they stand is continued, and esteemed a perfect model. When this palace was rapidly advancing, the queen on a sudden put a stop to its continuation, in consequence of some unfavourable astrological predictions, which were then much in fashion, and with which she was infatuated. Instead, therefore, of finishing this noble palace, she had another commenced by Giovanni Bulan, near St. Eustache, in a very bad taste, called l'Hôtel de Soissons. It is now demolished; and on the same site is the Halle au Blé, with two stair-

cases, so that those who are ascending avoid those who are descending.* The column, which formed the famous observatory of Catherine di Medicis, and her astrologer, Count Ruggeri, is attached to this, and has a very bad effect.

Philibert de Lorme was elected almoner and counsellor of the king, and enriched with a number of abbeys. His taste for profile was poor and barren; and his Corinthian bases, with three torii, extravagant. He asserted that he saw it at Rome in the Pantheon; but he was not more correct in his observations on the fourth order of the Colosseum, which appeared to him Composite. He has left a treatise on the manner of building well at a small expense, besides ten books on architecture. He was the first who wrote on the cutting of stone, and he has treated the subject in a very obscure and confused manner.†

* The dome is 120 feet in diameter, and the column, which is of the Doric order, is 100 feet high.

† Dupeyrat, *Antiquités de la Chapelle du Roi*. *Histoire Littéraire de Lyon*, par le P. de Colonia. *Vie des Fameux Architectes*, par M. D'Argenville.

END OF THE FIRST VOLUME.

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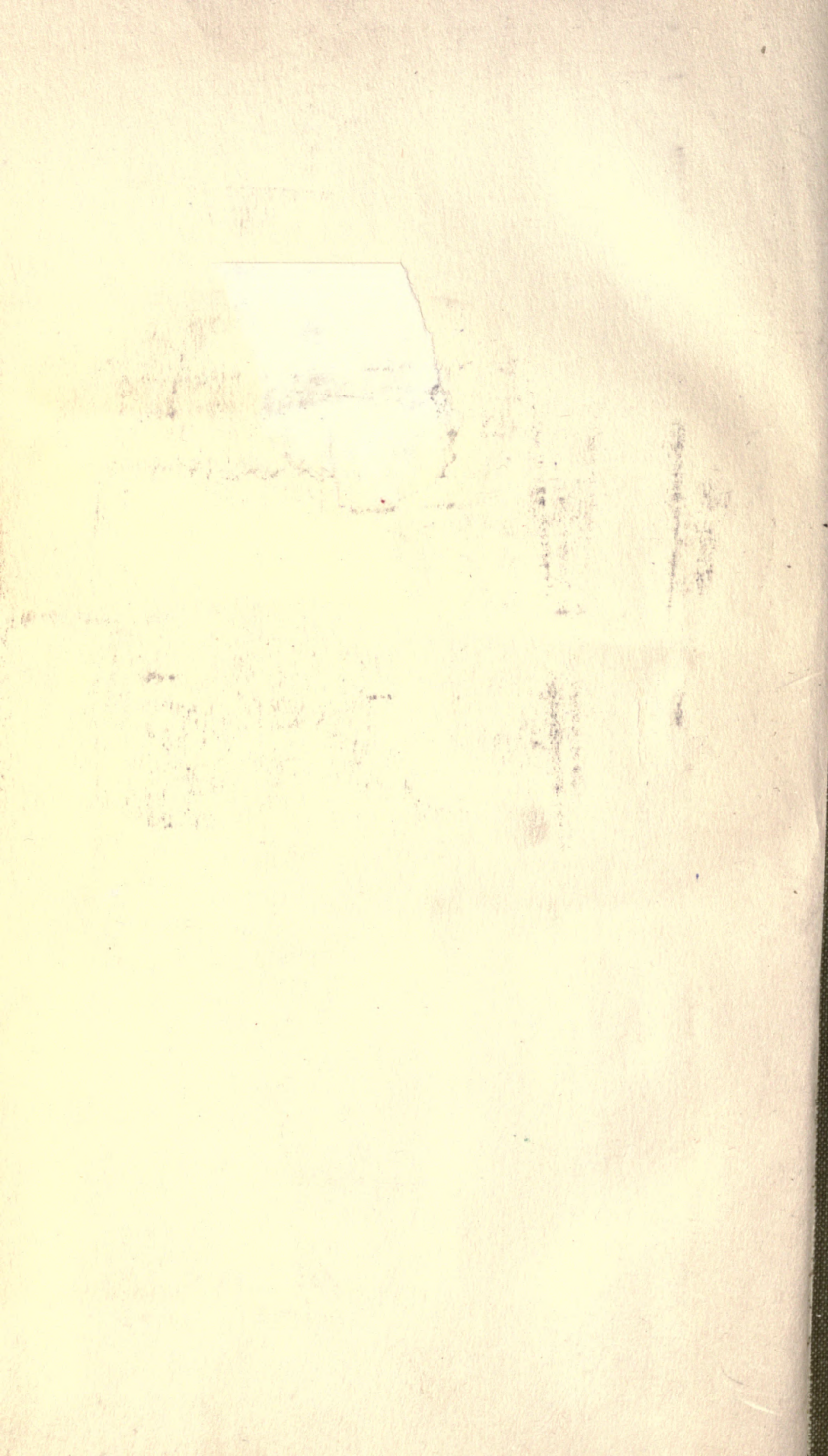
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cases, so that those who are ascending avoid those who are descending. The column, which formed the nucleus of the observation of Catholics in Medicine and not pathology. Count Jurgis is attached to this and has a very bad case.

Philippe de Lamoignon was elected minister and controller of the mint, and enriched with a number of abbacies. His taste for profits was not and barren; and his position was not three times extravagant. He asserted that he was at home in the Parliament; but he was not more correct in his observations on the fourth order of the Colossus which appeared to him. He left a treatise on the nature of profits, in a great number of books on arithmetic. He was the first who wrote on the nature of stone, and he has treated the subject in a very obscure and confused manner.

The book is in French, and is written in a style which is not very elegant. It is a very good book, and is written in a style which is not very elegant. It is a very good book, and is written in a style which is not very elegant.

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