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No. 3

MODERN DECORATION.

THE nineteenth century will leave no landmark in the history of decoration and the arts of ornamentation. Modern society has, so far, been unable to create any new forms of decoration, or to furnish and embellish its dwelling in an original style. This is a curious fact, and one that is difficult to explain.

The people of every epoch that has preceded our own were able to adorn themselves with a decorative garb to their taste. At the good periods, there has always been harmony between society and its surroundings—between the picture and the frame. Furniture and decoration under Louis XIV., for example, indicate the same tendencies, the same principles and the same elegancies, which, in higher domains, governed the development of the literature and art of that period. Racine's plays, Moliere's comedies, Bourdaloue's sermons, Le Brun's paintings, Coysevox's groups and busts—in fact, all the works of that time, proclaim a society fully conscious of itself, and of the beauty which it wishes to attain. That society has a character which it shows in the most diverse spheres; it distinguishes itself from the society which preceded, and from that which followed it; and just as it created a literature and an art of its own, so, without groping or hesitation, did it evolve a style of decoration adequate to itself and in perfect conformity with its needs and

tastes. The Palace of Versailles, its architecture, its vast and noble halls, which are majestic, though in a theatrical sort of way, its marbles, its mirrors, its brasswork, its pictures and its furniture, sufficiently demonstrate the very special and distinct conception which the society of that period had of ornamental decoration in all its branches.

In the same way, the society of the eighteenth century, intelligent but frivolous, reasoning but sentimental, free and learned, created for itself a new decorative form which enabled its elegancies and its fashions to appear to the best advantage. The Louis XV. style, in spite of its affectation and its deformities, will remain the most perfect style that a refined society has ever produced. That society was, in a marked degree, worldly, rich and elegant. Living artificially, knowing little about family life or calm, peaceful leisure, it naturally attached special importance to the reception rooms—drawing-rooms and boudoirs—with the result that Louis XV. decoration and furniture are pre-eminently drawing-room decoration and furniture, and they were remarkably appropriate to the needs of the society of that time.

It should also be noted that, at those periods, which we call style periods, the art movement did not remain confined to painting and sculpture, but extended to all branches of



No. 1.—FIREPLACE IN THE "ROTONDE BESNARD."
Hotel de l'Art Nouveau.



No. 2.—CEILING IN THE "ROTONDE BESNARD."

Hotel de l'Art Nouveau



No. 3.—DECORATION.

Hotel de l'Art Nouveau.

By M. Isaac.

the slightest productions of the various trades which contribute to decoration: wood, bronze, iron, tapestry, stuffs, silks, pottery, etc. One same tradition was followed and respected at all stages by the art worker. Hence the unity of the productions of a good epoch, as illustrated by the finished and perfect character of a Louis XV. drawing-room, that of the Archives, for instance.

In this manner, proceeding on parallel lines, we might, by consulting the furniture and the apartments of past times, compile a philosophy of decoration and furnishing, for the harmony between the society and the frame which surrounds it is so perfect that the latter leads up to the former and reveals to us its life and spirit. If this experiment were made in regard to our own time, what story would modern decoration tell as to the tastes and character of contemporary society? It would say that we are well-informed and inquisitive; that we like with an equal ardor or regard with an equal indifference the most diverse produc-

tions of the past; that we sit, according to the occasion, on a Gothic bench, on a Louis XV. chair, or in a morocco easy-chair; that the walls of our rooms may consist of Louis XVI. panels, Renaissance wainscoting, or be perfectly plain; that there is no trace of any dominant taste and no unity in the manner in which we decorate our apartments; that we accept an English dining-room contiguous to an entrance-hall after the fashion of the Middle Ages, and a drawing-room of the eighteenth century; that we burn gas in antique lamps, and that our candelabra in the style of a hundred years ago are traversed by electric light conductors. Hardly ever will one find an article made for the new purpose which it has to serve. We live on the past.

The decoration of some of the richest of modern apartments reminds one of the ceiling of a theatre. The Paris Opera House has too often inspired the decorators of the present day. On both continents we see the same subjects in gilded pasteboard, uncouth



No. 4.—THE DINING ROOM.

Hotel de l'Art Nouveau.

rubbish and trash which comes to us in a direct line from the rococo Italian style.

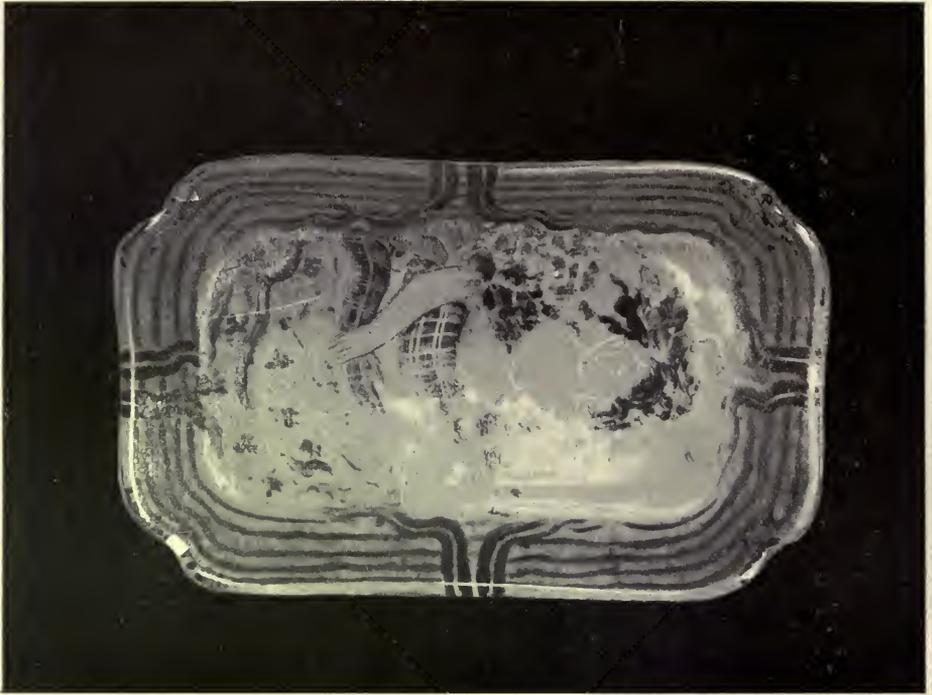
The best we are capable of is an imitation of the ancients, and even in this we have lost the knack of that clever handiwork which gives a priceless value to trivial objects. We do not know how to work iron, nor chase bronze, nor carve wood, as it was done a century ago. The workmanship has become coarser. It is necessary nowadays to manufacture on a large scale and supply a new class of customers, who are easily satisfied, and do not place artistic qualities above all else. Consequently, far from producing anything new we cannot even copy in anything but an inferior manner.

If our style of decoration is not historical, that is to say, borrowed from the past, then it can almost certainly be said that we have no decoration at all. We have very comfortable rooms, of which heaven preserve me from speaking any evil. They fulfil the purpose for which they are intended, but

they have not the slightest artistic character, and do not reveal any tendency towards the creation of a decorative style.

Thus, an examination of our apartments would lead to the following discouraging conclusion: that modern society, confused and divided, has not yet succeeded in forming an idea of its tastes and requirements, and that, finding it impossible to discover any new form of decoration, it is reduced to living, so to speak, in other people's houses, and to reviving in its own behalf furniture and decorations made for other circles, and which were perfect only because they correspond exactly to the needs and the taste of their day.

Whence will the new style come? What nation will give it birth? We Europeans are trammelled by so many old memories that we shall, perhaps, be slow in evolving any original idea. Will it be America, freer, younger, and upon whom the past weighs less heavily? What has the fast-approaching twentieth century in store for us?



No. 5.—CHINA DECORATION.

By M. Vuillard.

Will it, too, continue to clothe itself in old-fashioned garments? These questions are full of interest, and reach further than they seem to, for a society worthy of the name and truly great cannot exist without art, which outlives everything, dead nations as well as extinct grandeurs.

However indifferent modern society may have been in these matters, it is right to state that there have recently appeared signs of an awakening. Everything, as yet, is in the preparatory stage; nothing is settled; nothing, so far, stands forth clearly; but we are seeking, which is already a great point, and we shall find. Artists are ridding themselves of the false idea formed during the present century that there is an absolute distinction between what are called the fine arts—architecture, painting and sculpture—and the decorative arts, and that only to the former can an artist devote his life. They do not disdain now

to apply themselves to decoration properly called, to the study of special processes, and to visiting factories and workshops in search of new decorative forms. As a matter of fact, we shall have no modern decoration until all prepossessions in regard to the past are altogether dissipated: the new style must be wholly created by the free mind of the artist, who is not a copyist, nor a literal interpreter of styles already known.

We should like here to mention a few of the latest efforts made in very different domains, to indicate the idea of the artist, and to say, if necessary, the special process employed in these attempts at modern decoration. The house which M. S. Bing has just refitted in order to consecrate it entirely to L'Art Nouveau has given a number of people a desire to try to introduce innovations into the rich and interesting field of decorative forms, and in future L'Art Nouveau will give



No. 6.—CHINA DECORATION.

By M. Vuillard.

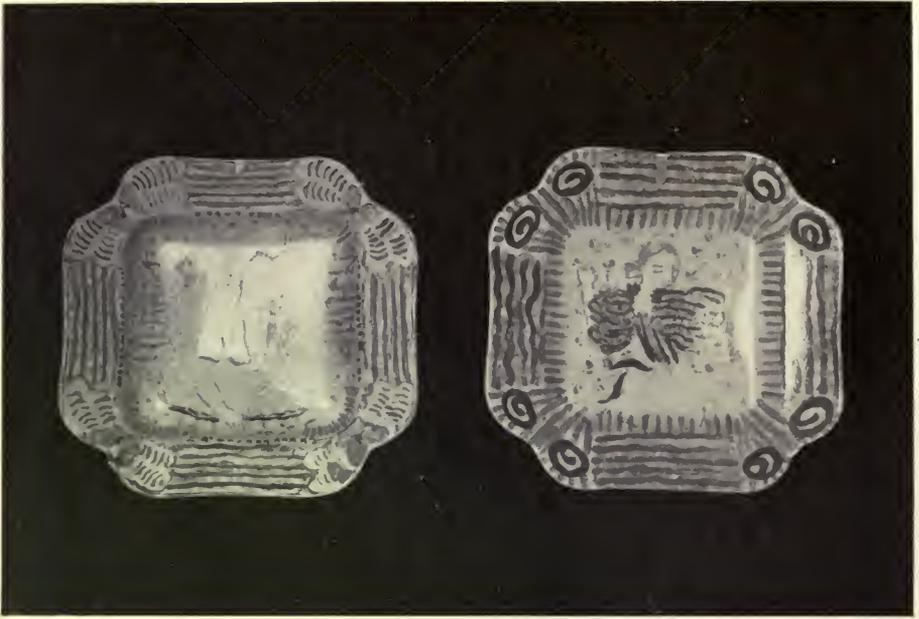
a hearty welcome to all endeavors in this direction.

As will readily be imagined, the programme so intelligently formulated by M. Bing has been the object of much criticism. These searchers after new forms have had to encounter the opposition of preconceived ideas, and have been greeted with a great deal of banter. In my opinion, the critics are wrong. It is evident that at the outset, we cannot expect to see a style that is harmonious and complete in every point, and whatever mistakes and blunders may have been committed, it is, nevertheless, certain that the efforts of artists have been turned into a new and excellent channel. Anything that will deliver us from the obsession, the unintelligent copying, of the past, ought to be received kindly and studied with interest.

Here is a drawing-room, decorated by A. Besnard, in which painted decoration plays the principal part. The room is round, and the walls are divided into long panels separated by the windows. The chimney-piece, of ingenious shape, harmonizes with the

general form of the room, and the panels. The most charming part is certainly the ceiling, on which is represented a circle of women holding each other's hands and dancing. With great skill the painter has succeeded in keeping his figures in a ring and filling it with them only. The movements of the women and the very decorative line of their whirling skirts make this work a completely successful ceiling picture, and painters who have attempted a similar task know well enough how difficult it is. This drawing-room is lighted by electric lamps, placed out of sight on the circular cornice; the light is diffused by passing through a screen of yellow silk. It is, therefore, the painting which constitutes the decoration, and we reproduce the figures merely to provide food for reflection for artists who may undertake a like task, and to show them the elegant manner in which M. Besnard has solved a difficult problem.

Another artist, M. Isaac, has different conceptions. He would like to see stuffs play a new and a larger



No. 7.—CHINA DECORATION.

By M. Vuillard.

part in decoration. He would paint them, and at the same time let the material itself remain visible and palpable, an apparently insoluble problem. Yet he seems to have solved it.

M. Isaac's starting point is the old and sound rule, which is often forgotten nowadays, that each material requires to be treated in a particular fashion and in accordance with its own nature: in other words, that each material calls for a special method of work, a certain technique. This seems a self-evident truth, and yet it is one that is violated constantly at the present day. Every intelligent artist knows how to bend to his material; he respects it and tries to make it render only those effects which it is susceptible of rendering. In some countries the humblest workmen have this sense of the capabilities of the material, and their knowledge is displayed in the most insignificant productions of industrial art. For instance, it is these qualities of the material which give so much value to Japanese articles of vertu. The material employed

is always of great beauty, and no article of the kind can be reproduced in a different material without losing thereby the very flower of its elegance.

Now, in the matter of furniture stuffs, we are very poor. We are restricted to cretonne prints, woven silks, brocades, velvet, plain or stamped, and the uniform tints of reps and plushes. Yet how interesting it would be to take a stuff of a certain texture—velvet, plush, reps or canvas—and cover it with a decoration which would religiously respect the tissue and leave unimpaired the special reflex of the material employed: the softness of the velvet, the iridescent depth of the plush, the clear markings of the reps, etc. Even more, the process followed might cause the stuff itself to contribute to the effect produced by the decoration applied to it, certain subjects and certain colors being particularly suitable for certain kinds of stuffs.

It is thus, I imagine, that M. Isaac has been led to undertake the decoration of a drawing-room with canvas

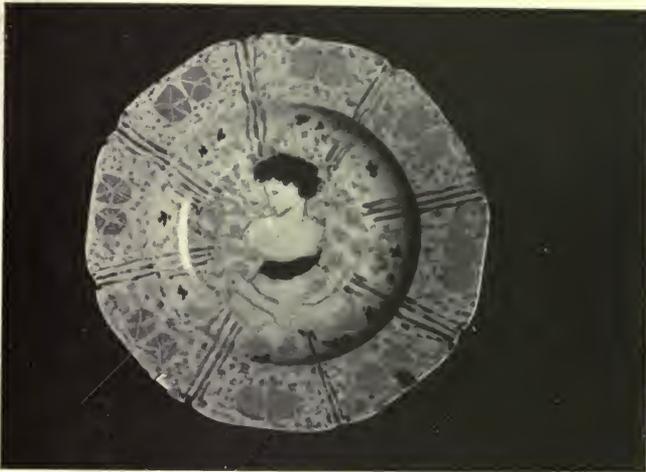
panels, treated in an entirely novel manner. He employs three different processes:

(a.) Upon a stuff of a given color, dark blue, for instance, he sketches the design which he has chosen; he then covers over the parts drawn upon, keeping them thus in reserve, and submits the entire canvas to the action of an acid. The acid bites the color off the canvas, except at the covered parts, which keep the original tone. Finally, the artist is able, by leaving certain parts of the canvas in more or less prolonged contact with the acid, to obtain the shades

which enters into the stuff and forms one body with it. The stuff is then subjected to the tinting methods already mentioned.

As is shown above, the material employed, the special texture of each stuff, is respected and remains intact. The decoration forms an integral part of the stuff itself. One easily sees what a great variety of effects can be arrived at in this manner, how the most opposite tones are brought, thanks to the shading, to melt into and unite with each other.

M. Isaac has decorated an entire room at L'Art Nouveau. The wooden



No. 8.—CHINA DECORATION.

By M. Vuillard.

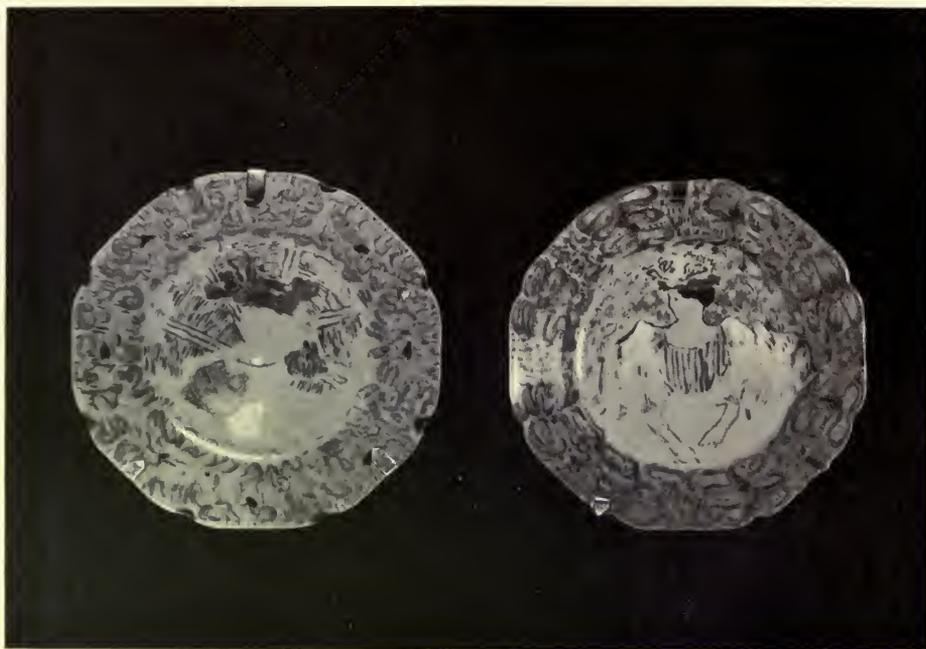
which seem to him the most suitable for the decorative effect desired.

(b.) The process is inverted; only the parts covered by the drawing are subjected to the action of the acid, the stuff being reserved. The artist can then either leave the parts bitten by the acid in the tone produced, or modify them by putting on such tones as he considers best. In this case also, the parts exposed to the action of the acid are so exposed for a length of time which varies according to the effect sought for.

(c.) A variation of the two preceding processes. The parts drawn upon are impregnated with melted candle-wax,

frames have been treated with acids in the same manner as the stuffs, although the result is less frank and less happy. Illustration No. 3 shows two panels and a door-curtain of this room.

What appears to me specially worthy of notice is the artistic freedom of work which this process allows of. China crepe, velvets and plushes can be treated in the same way without losing the properties peculiar to them—their suppleness, their twill, their individual appearance. Thus, not only decoration, but the fashions themselves, can benefit by the researches described above. One will be able to have a gown decorated. It is to be



No. 9.—CHINA DECORATION.

By M. Vuillard.

hoped that a number of artists will follow in the track opened up by M. Isaac.

In the dining-room of the same house, wood is the principal feature. The wainscoting reaches as high as 5 feet 8 inches. It is surmounted by a console, upon which vases, jars and plates will be placed peasant fashion. Above, there is a painted decoration by M. Raouon, the general effect of which is, perhaps, not so satisfactory as we have a right to expect from such a sincere and clever artist. But what interests us most is the woodwork, which is inlaid with brass. The wood is polished cedar, of a clear, warm color. In each panel an ornament in polished brass is inlaid. This alliance of wood and brass is very happy, and, for such a purpose, quite novel. The illustration (No. 4) which we give only serves to give the lines and an idea of the brass ornamentation; in reality, these two substances combine together in the most charming fashion. The chimney-piece, where the brasswork mingles with the bricks, is

surmounted by a fine stained window executed by Mr. Louis Tiffany, from a design by M. Raouon. The furniture of the room is in cedar wood, with the same brass incrustations. It has been made, like the dining-room, by M. Van de Velde. The general tonality and the form of the furniture make it a delicious summer dining-room suite for a country house. Henceforward, new combinations of wood and metals can be invented for the woodwork. There is no doubt but that equally satisfactory results will be obtained with other kinds.

The artists who are endeavoring to give decorative art a new direction, and to provide contemporary society with forms that are not merely retrospective, have tried their hands in very different domains. At the inauguration of the *Hôtel de L'Art Nouveau*, there was on view in the dining-room a china dinner service, the entirely original decoration of which was highly pleasing. It is the work of M. Vuillard, one of those young painters from whom great things are expected. At



No. 10.—CHINA DECORATION.

By M. Vuillard.

this first attempt at china decoration he has produced something masterly. M. Vuillard has proceeded with singular sureness in the path which he has chosen. His decoration of an entire drawing-room—on canvas, with size colors—which can be seen and admired at M. A. Netanson's house, in Paris, had already drawn attention to him as an artist who is extremely thoughtful and conscious of the resources and of the limitations of his art. M. Vuillard is a painter in the true sense of the word; that is to say, a man for whom the world of color exists, for whom the greatest joys lie in a beautiful association of tones, in a tuneful scale of friendly colors and in contrasts brought into play in a harmonious manner. At the Hôtel Binet, M. Vuillard also exhibited some drawing-room panels, in which he has attained a formula still richer and more complete. In the china dinner set, which he has decorated, and which belongs to the writer, he has, on the contrary, handled new problems, and nothing is more interesting than to see how well he has been able

to adapt himself to the exigencies of a different substance and a different kind of decoration. We know what the ordinary decoration of dinner services is, and how much remains to be done to finally give china an artistic character. In no other direction, we think, has such poverty and such a total absence of the decorative sense been manifested. Wretched plates on which are depicted scenes of gay life, shepherds in eighteenth century costume uttering weak compliments to their female companions, landscapes faithfully copied, mythological scenes, ornaments without reason and without any necessity—these are the things currently sold. We have seen a luxurious dinner service on which were pictured Tritons and dolphins ejecting water from their wide open mouths, and, the appetite once satisfied, it was impossible to resist a feeling of disgust to see these creatures mingling so much water with the food. And even when the decoration is only vegetable or geometrical, the absolute indigence of color and the want of skill on the part of the painters, who, it is



No. 11.—CHINA DECORATION.

By M. Vuillard.

easy to see, are simple workmen without any concern for art, also displease the eye. M. Vuillard thinks it is possible to decorate a plate artistically, and that if decoration be the sole object kept in view, many of the gross faults committed by china manufacturers can be avoided. He has chosen three simple colors, the effect of which he has tried by burning in: a warm reddish brown, a green and a blue. He has composed the service with these three colors alone. There is a different pattern for each dozen plates, seven in all. The dishes, the cooked fruit dishes and the sauce boats match the plates which they accompany.

As can be seen from the photograph which we reproduce, the ornamentation is everywhere treated in the boldest manner. Broad scrolls, some curled and some waved, adorn the plate; but the artist has taken care to preserve the form of the plate, and to display its characteristics. For the central motive of the decoration he has taken women—not Louis XVII, shepherdesses, but women of the present day. He has, however, been care-

ful not to treat them as might have done a portrait painter or a designer of fashion plates. He has only taken so much of them as can be taken for decorative purposes. He has sought inspirations in the fashions of the day, and has made use of whatever was suitable to the work he desired to produce, and thus, reduced by him to their essential decorative signification, we have large spotted sleeves, silk blouses of assorted patterns, the low bodices, the large bows and the ribbons with which our women folk bedeck their persons; the immense hats with feathers, the waving plumes with which they crown themselves—in fact, all the frivolous and charming side of feminine life of the present day.

The tones of each dozen plates vary as regards their relative proportions. Thus, in the fish plates green predominates over the white at the bottom, and the plate is delicately light. In the vegetable plates brown and light blue give the prevailing note, which, in the meat plates, is indicated by dark blue.

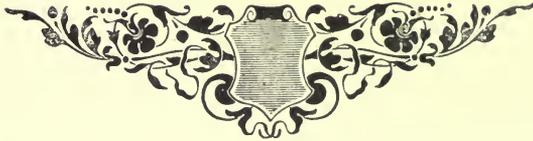
In this way, using the three same

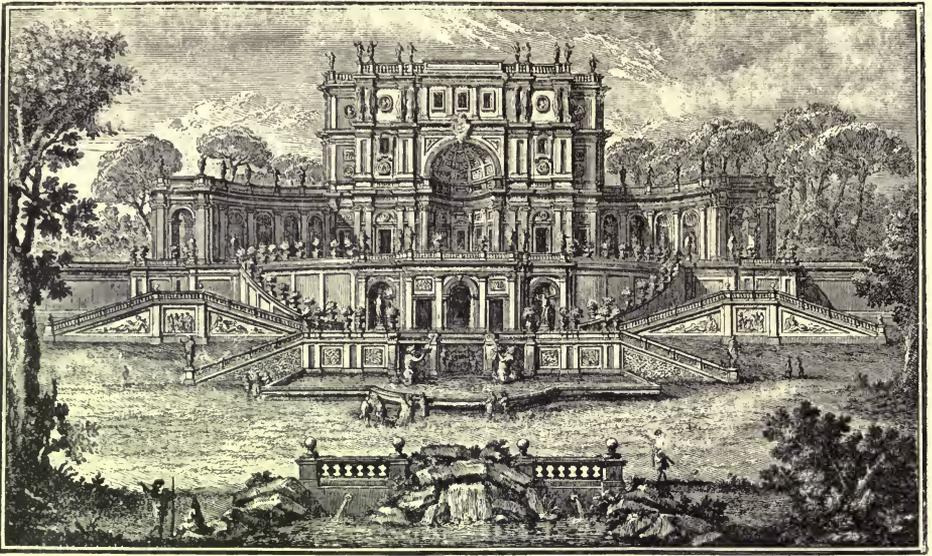
colors, diversely gilded, the artist has attained a great variety of effects while confining himself to the same gamut of color. There is here a great success in the domain of porcelain decoration, and it is a pleasant thing to see art lending its aid to the beautifying of the most familiar and common articles.

Such are a few of the novelties which have been produced in the al-

most unexplored field of modern decoration. We cannot doubt but that these efforts will inspire others, and in this manner, step by step, we shall see the decorative arts spring up again with new life; the taste of the public as well as of artists will become more and more refined, on each side a desire will be felt to cut away from the past and to give a new society a new frame and a new decoration.

Jean Schpofer.





VILLA SACCHETTI, FROM AN OLD PRINT BY G. VOLPATO.
 Designed by Pietro de Cortona about 1626—In ruins for more than one hundred years.

THE VILLAS OF ROME.

IN matters architectural and artistic we find ourselves in much the same position that other people have occupied at the approach of the great movement which is known as the Renaissance. Like them we are emerging from a period of disorder during which we have had neither the time nor the means for the cultivation of artistic tastes, and like them we have suddenly found ourselves possessed not only of the desire for artistic objects, whether of architecture, sculpture or painting, but with the means by which that desire may be gratified. We have already felt the influence of the object lessons of the Chicago fair, itself but an evidence of the revival.

The Victorian Gothic, the Romanesque and the badly designed attempts at Classical architecture, which for many years divided the field of city building, are becoming more rare. Even in the country which is better adapted for picturesque architecture, the so-called Queen Anne cottage, which for the last twenty years has run riot in the unbridled license of shingled turrets and creosote stains,

is giving place in popular favor to the revived Colonial.

It is safe, therefore, to predict that in the near future our country-seats will be designed in some recognized style of classic architecture, and that the surroundings of these buildings will show some recognition of the classic principle that there must be no abrupt transition from the formal architecture of the building to the unrestraint of nature—that there must be a middle ground where nature is indeed present, but restrained by architectural lines.

We have, indeed, always recognized these principles, though we have adopted quite different means than those of Italy, France and England for meeting their requirements. Previous to the Centennial our suburban dwellings, however badly designed they may have been, were still classical in outline, and we felt, though half unconsciously perhaps, that there was something incongruous between their rigid outlines and the equally uncompromising level on which they were placed. We tried to soften the vertical outline of the building with trellises-

and by breaking up the horizontal level of the lawn with shrubs to conceal the ugly angle. Ignorant of other motives of landscape gardening we abandoned the unsuccessful compromise, and instead of making the surroundings harmonize with our buildings we made our architecture subservient to its accessory.

It now became our object to make our buildings spontaneous in the landscape. Rock-hewn ashlar and even fieldstone carried up the lines of the undulating grounds which were now selected for the more picturesque setting of the new style of suburban house, while above the strong colors of the shingles blended with the landscape.

Our forefathers in colonial days solved the problem in the other way, and very successfully. In the formal boxhedge approach, in the disposition of their lawns and gardens, in their arbors and terraces, they found a simple but effective setting in character with the severe lines of their dwellings, whose charm is the more apparent in contrast with our revived colonial destitute of these surroundings.

A growing love of luxury and display will tend to increase the number and elaboration of our great estates and country houses. It is therefore timely to consider in what ways the architects of the Renaissance solved problems similar to those which will soon present themselves.

As the villas of Italy have served as models to all the other countries which have with more or less success attempted landscape gardening on classic lines, it is proper that we turn to the fountain source for our inspiration; but before we can study the villas of the Renaissance we must know something of the social causes which led to the erection of this type of dwelling.

While it is not within the scope of the present article to enter into any lengthy description of the villas of the Republic or of Imperial Rome, still the villas of the Renaissance are so intimately connected both in conception

and plan with those of classic times that a short consideration of the latter will not be out of place.

It was during the last century of the Republic that the great villas of the wealthier citizens grew out of the unpretentious country-seats of more austere times, but it was not until the Imperial period that they attained their fullest development.

While a few of these villas were erected within the city walls, by far the greater number were in the suburbs, where there were greater facilities for the gardens which formed an important adjunct to the villa, or casino, itself.

It is difficult for a person, who traverses the desolate tract of the Campagna, to believe that the fever-breeding plain which surrounds Rome on every side was once a fertile valley, that the barren waste, whose grey fields, unbroken by tree or dwelling, are now so deserted, was once a densely peopled garden, covered for many miles in every direction with fertile farms and luxurious villas.

Here alike were the modest country-seats of the upper classes, the manors of the great patrician houses such as the Servian, Flavian, Claudian and Valerian families, and here were the magnificent establishments of the Emperors Titus, Claudius, Hadrian and Domitian, the solitary ruins of which still stand to further enhance the desolation of the Campagna.

To many of the great families belonged a number of villas situated in different parts of the Campagna. It was from no extravagant display of riches that they possessed so many luxurious homes. The English aristocracy is very similar to that of Rome, and from an identity of principles and education came identity of ways of life.

Like the English aristocracy the younger members of the families served in the army or in the diplomatic service, while those of maturer age sat in the Senate or held other places under government. This compelled them to remain near Rome during the greater part of the year, while the heat

and unhealthfulness of the city made a residence in the country within easy reach of the city desirable.

The Roman season was short, so that during the greater part of the year the family lived in the country, and as the comfort of the house depended largely on its situation, those who could afford it built themselves several villas, some on the cooler heights of the hills or in the Alban mountains, some in the warmer plain of the Campagna, some facing the south that they might profit by the warmth of the sun, others to the north, east or west, according as their owners courted or avoided the various winds, which then as now play an important part in the Roman climate.

We are possessed of very accurate information, not only of the plans and designs of the villas themselves, but of the arrangement of the gardens and shrubbery which surrounded them and the modes of life of their owners. This is derived from three sources; from descriptions, such as the well-known letters of Pliny, in which he details minutely his Laurentine villa, and many passages in the writings of Cicero; from fresco representations, such as are depicted on the walls of Pompeii, in the greenhouse of the gardens of Maecenas on the Esquiline and in the Villa Livia on the Via Flaminia; and lastly, from the remains of the villas themselves. From these many sources we may obtain a clear picture of a typical villa of the classic period.

The grounds were divided into two distinct parts, the lower which was devoted to the barns, stables, dwellings for slaves and other out-houses connected with the farms and vineyards, and the upper portion where were the gardens and dwelling of the proprietor himself.

The latter was built upon a hill, where nature had provided one, or if less favorably situated a large area was raised on terraces upon artificial foundations. This arrangement had double advantages because from every terrace the eye could have an uninter-

rupted view and because a small supply of water which played such an important part in the landscape gardening, could be used many times in a great variety of fountains, cascades and nymphæa.

Attached to the main dwelling-house were smaller buildings, placed in suitable situations among the gardens, such as libraries, swimming pools, gymnasia, porticos and exedras. The terraces were adorned with statues in bronze and marble, while fountains and temples were so disposed as to terminate the long alleys of ilex or cypress.

The hedges of box, myrtle or laurel were carefully trimmed into walls in which doors and other architectural details were depicted. Even the pomegranates, yews, and plane trees were cut in geometrical shape, to harmonize with the spirit of symmetry which pervaded the whole.

The vines were trained over arbors of cane, supported upon marble columns, and even the violets, roses, crocuses, poppies and amarynth the favorite flowers of the Romans, were confined within beds of formal and geometrical design.

Such was the villa of the Imperial period. How closely the architects of a later day followed their models, and how few features they abandoned or invented will be seen by comparing the Renaissance villas with their classic prototypes.

When Rome was besieged by the Goths, the villas of the Campagna were deserted by their owners who took refuge in the city. Many were sacked and burned by the Goths, the others fell into ruin and decay, and what was once a highly cultivated garden became the pestilential prairie which we know to-day.

A civilization, which for a thousand years had made Rome a synonym for all that was highest in art and culture had come to an end.

Classicism was dead and feudalism reigned in its stead, and with changed conditions came new modes of life, Rome was transformed into an armed

camp, men no longer had the time or indeed the inclination for learning, new buildings were no longer erected since the old ones were made to do duty as fortresses, and no others were needed.

We must pass over the centuries under cover of whose darkness Rome was battling for existence, continually threatened by her foreign enemies, and over the period when the struggle between Pope and Emperor left little time for the cultivation of other arts than those of war.

The suppression by Pope Nicholas V. (1450) of the conspiracy of Porcaso, the last struggle for municipal freedom in Rome, marks also the death of feudalism and the birth of the Renaissance. With the loss of independence the people turned away from politics to live for art and literature, so that the era of the final establishment of the Popes as temporal sovereigns of the city is also that of the dawn of the Renaissance. The spirit of the Renaissance whether we call it skeptical or analytical or merely secular—the spirit which was the exact antithesis of mediæval mysticism—broke through its barriers and swept feudalism before it with all the force of a pent-up torrent.

All Italy felt the impulse and burst into new life. Poets, whose discouraged song, drowned by the drums and turmoil of a thousand years, had long been silent, found in love and beauty more congenial themes than wars. Scholars, whose philosophy had long been fettered by the chain of faith, no longer wrote as others taught. To the artist and the architect whose skill had been confined to the painting of a Byzantine pieta, or the building of a fortress, a new world was thrown open.

The fire of old Rome had indeed exhausted itself, but beneath the ashes of a buried city the embers still lived; at these the artist artisans rekindled the torch of learning which was to illumine the darkness of the ages and reveal a different world.

Enchanted by the beauty of the an-

cient models, men came to regard with aversion and contempt all that had been done from the days of Trajan to those of Nicholas V. and turned from all that savored of feudalism or monkery too indifferent to be hostile. Greek became the fashionable language of the court, and classic literature and art were the only subjects thought worthy of discussion.

In Rome Gothic architecture had never obtained a footing. The buildings which had been left as a rich heritage of classic Rome had sufficed for the needs of a much smaller city. In repairing these or in constructing new ones the invention of the architect was too greatly enthralled by the beauty and abundance of his models to permit him to become more than a faithful imitator.

Accordingly, the architects and builders, though few in number, were not unprepared for the sudden demand for new and more elaborate buildings.

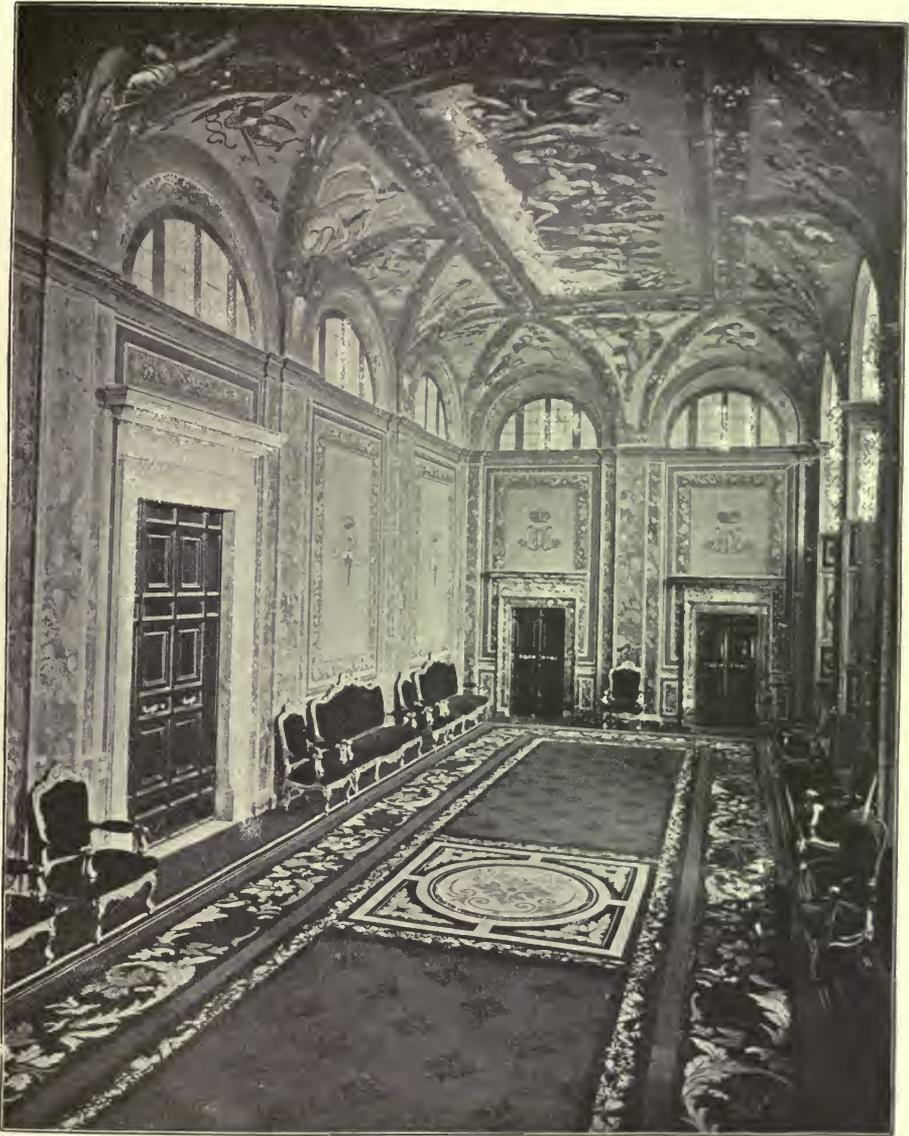
No employment could have been better suited to the court of Rome. The Papal aristocracy were indolent, wealthy and fond of displaying both their riches and their good taste. As each new pontiff was created, a wealthy and powerful family was added to the aristocracy and several palaces and villas were erected to accommodate the numerous relatives of the Pope.

It is impossible to state with precision the date when it became the fashion to erect villas. A comparison of the stern façades of the early Roman palaces, which seem to have been designed with the view to resisting attack, with the light and unprotected architecture of the villas would indicate that sufficient time must have elapsed between the two types of dwelling for an important change to have taken place in the social life of the city.

It is quite probable that the great popularity which the villas enjoyed was due quite as much to the fashion of imitating Roman modes of life as to any real necessity for the villas *per se*.



THE ANCIENT THEATRE IN TAORMINO, SICILY.
From a fresco in the Burg Theatre, Vienna.



LOGGIA OF THE FARNESINA, WITH FRESCOES BY RAPHAEL.

It is certain, moreover, that the character and plan of these villas were directly inspired by those of ancient Rome, for we know that all descriptions of the latter were carefully studied and that the architects of several villas, such as the Villa Pia in the Vatican gardens, and the Villa Barbarini at Castle Gondolfo, prided themselves on having reproduced as perfectly as possible the villas which had occupied the same sites.

In the Renaissance villas we find the same dual division into park and out-houses on the one hand and gardens and the casino on the other. There is the same employment of terraces and the same use of water in cascades, fountains, grottos and nymphæa.

The gardens are planned on architectural lines with carefully hedged walks which radiate or intersect at a fountain, temple or statue which terminates the vistas. The statues, obelisks and Hermea which once adorned the villas of Imperial Rome are brought forth to again perform a similar service. Even the sarcophagi of the Romans themselves are found employed as fountains by their ardent admirers of a latter day.

No happy scheme of classifying the villas presents itself. So many have been destroyed during the last twenty years that it is difficult to discern the traces of chronological development, and the influence of one villa upon the architecture of another is not apparent. Nor can they be classified according to plan, for their plans were entirely controlled by the character of their sites, and no two are alike. There is, however, a marked difference between the villas within or just beyond the city walls and those situated in the suburbs. In the former the grounds are often limited or are employed in a more naturalistic way that their walks and drives may offer a marked contrast to the streets of the surrounding city. There are fewer advantages of hill and valley. The absence of an attractive view restricts the use of terraces, and the expense of employing water brought from a great dis-

tance limits its use to fountains and grottos.

The villa itself is also affected by the proximity of the palace of its owners and is seldom more than a casino for the exhibition of statuary and frescoes. Few of them were intended as residences, but they were designed rather to serve as rendezvous for the entertainment of visitors and the display of the fine arts.

The oldest of the existing villas is that erected by Agostino Chigi, the wealthy papal banker of the sixteenth century, famous for his patronage of the arts. This villa, now known as the Farnesina, was created in 1510, from the plans of Baldassare Peruzzi, upon the site of the gardens of the Emperor Geta, where many bronzes and marbles, now in the Vatican collection, were discovered. The villa lies in Trastevere, upon the banks of the Tiber, nearly opposite the Farnese palace. The gardens, which have been greatly curtailed by the recent alterations made in the course of the river, were once very extensive, and were laid out on architectural lines, although the flatness of the ground would have made an elaborate treatment impossible, even if the fashion of extensive terraces and ramps had been in vogue.

Nothing could be more simple than the plan of the villa itself, nor better adapted for the purposes of a building designed wholly for pleasure. As the villa was never intended to be occupied as a dwelling, all restrictions of convenience were wisely sacrificed that the salons and galleries might be suited for entertainments and adapted to receive fresco and other decorations of the most elaborate description.

The plan of the building is an oblong, which is broken in front by two projecting wings. Between these is a loggia (64x23 feet), which is now enclosed. Adjoining this on the left is a similar room, which, also, was originally without its protecting windows and opened upon the gardens. The other rooms upon this floor are of minor importance. The first of these, of which an illustration is here given,

was decorated in fresco by Raphael, assisted by Giulio Romana, Francesco Penni, Giovanni da Udine and others of his pupils.

The coved surfaces of the ceiling are adorned with ten illustrations of Psyche, according to the story of Apuleius, a Latin author of the second century, much read by the Renaissance court. On the ceiling itself are depicted in two large frescoes the appearance of Psyche at the feast of the gods and the celebration of the nuptial banquet.

In spite of the fact that these frescoes have suffered severely from the weather and from the unhappy restoration of Carlo Maratta, who restored the once soft background with a blue of such strong quality that the outlines appear hard, and the figures themselves suffer in contrast, the effect is charming and brilliant, for the beauty of the design and the skill with which it has been executed made the room renowned even in a period so rich in noble creations of art.

The other large room contains a second mythological picture by Raphael, which is no less charming than the Psyche series; while being entirely from the master's own hand it surpasses it in execution. This is the famous Galatea, who is depicted surrounded by nymphs, tritons and cupids.

The ceiling was designed and executed by Baldassare Peruzzi, who depicted there the constellations by scenes from the fables of mythology, the signs of the zodiac and the gods of the seven planets. These are contained in panels whose frames are so skillfully painted to resemble stucco relief that it is said that Titian would not believe that the effect was produced by paint alone.

The lunettes were filled by Sebastiano del Piombo with subjects taken from Ovid's *Metamorphoses*, Tereus with Philomela and Procne, Daedalus and Icarus, Juno in her chariot, drawn by peacocks; Boreas and Orithyia, Flora and Zephyr and other scenes from the kingdom of the air.

The upper rooms of the villa are also rich in frescoes by Peruzzi, Sodoma and other masters. Here are depicted Deucalion and the flood, Apollo and Daphne, Venus and Adonis. Bacchus and Ariadne, Endymion and Luna, Cephalus and Procris.

These frescoes have been dwelt on not only because they are remarkable in themselves and more than anything else have made the Farnesina a shrine for lovers of art, but because they emphasize two important facts: that the villas were erected not for any utilitarian purpose, but that they might afford their builders opportunities to display their learning and good taste and their patronage of the allied arts of architecture, painting and sculpture; and, secondly, that the Roman villas express in their purpose and character more plainly than do the churches, palaces or any other erection of the Renaissance, the intensity of the newly born love of classicism.

Great opportunities were offered for elaboration, and here, without impropriety, the decoration could be wholly pagan. The walls are, therefore, decorated in fresco with scenes from pagan myths or with arabesques suggested by those discovered in the ruins of Roman buildings or in stucco of a like inspiration. The rooms and gardens are adorned with statues and fountains and the walls with architectural fragments from the buildings of classic Rome—a fitting setting for the gay throng of cardinals, princes, poets, scholars and artists who constituted the papal court and who strove by imitating the art and learning of Rome to delude themselves that the greatness of Rome had returned, and that the counterfeit could compensate for the loss of freedom, a national spirit and the activity of civil life.

As might be expected from the early date of its erection the exterior of the Farnesina is of a more sober architecture than is usual with the Roman villas and is admirably in keeping with the richness and elegance of its interior decoration. Traces of ornament in various places make it evident that



GARDEN FAÇADE OF THE VILLA MEDICI.

certain portions, if not all, of the exterior was originally decorated with paintings in grisaille.

While the proportion of the orders and the heaviness of the entablature may be adversely criticised, the happy projection of the wings, the richness of the loggia and the grace and elegance of the whole building justify the expression which Vassari applied to the villa: "Non murato, ma veramente nato."

In 1580 Cardinal Al. Farnese inherited the villa, which remained in the possession of the Farnese family until its extinction in 1731. Together with the rest of the Farnese property it passed to the King of Naples, and in 1861 it was let by Francis II. for 99 years to the Duke of Ripalda.

In ancient as in modern times the Pincio has been recognized as a spot well adapted to the requirements of a villa. Here were the famous gardens of Lucullus, around which clustered others of less note until the hill was so closely covered that Ovid terms it the

"hill of gardens and villas." Nor were the builders of the Renaissance slow to appreciate the advantages, for as early as 1540 Cardinal Ricci da Montepulciano commissioned Annibale Lippi to erect on the steep side of the hill the large villa known to-day as the Villa Medici from its subsequent owner, Cardinal Alessandro de Medici, who became possessed of the property in 1600.

Seen from the city below or from the opposite side of the river the great yellow building, with its two belvedieres, forms a conspicuous object in the landscape, but the façade is bare and uninteresting, since the lower half is in reality nothing but a lofty sub-basement, while in the upper there has been no attempt at decoration.

From the broad terrace shaded with ancient ilex trees, which lies before the villa, a ramp leads to the gardens which occupy the crest of the hill. It is on this upper level that the main façade faces. The grounds are divided into three parts: the park, which



THE UPPER TERRACE OF THE VILLA MEDICI.

occupies the northern portion; the central garden, which lies before the villa; and the upper park, which adjoins it on the south. The first of these parks, to which the ramp ascends, is laid out on architectural lines and filled with trees and shrubbery. The broad driveway, which surrounds it, commands on the west an extensive view of the city lying more than two hundred feet below, and an equally fine view of the park of the Borg-hese villa which adjoins it on the east, while at the north it opens upon the gardens of the Pincio.

The oblong thus contained is divided into many smaller plots by straight paths, adorned with hermea and antique statues. The vistas between the hedges of well-trimmed box, over which hang the branches of trees and shrubs, are terminated by fountains, statues or pavilions placed at the intersection of the paths or by exedras and grottos placed at the ends.

As has been said, the villa stands on the very edge of the hill; before it is a large open square where the coaches of the guests might congregate, while the remaining portion is devoted to the garden. A high wall, treated as a closed arcade and half hidden beneath rose trees, bounds the garden on the south and separates it from the wooded park which occupies the highest portion of the hill.

Our illustration shows this garden wall and a charming group of architectural fragments, which terminates the central alley. Here two ancient columns support a broken architrave and pediment, below which is a Greek statue, said to be from the hand of Scopas.

In strong contrast with the bare walls of the west façade is the elaboration of that which fronts upon the garden. The whole façade is richly adorned with panels and niches filled with fragments of classic carving unearthed in the vicinity. These have been so skillfully disposed in appropriate places that the effect is not in the least bizarre, but rather playful and charming. The brilliancy of the yel-

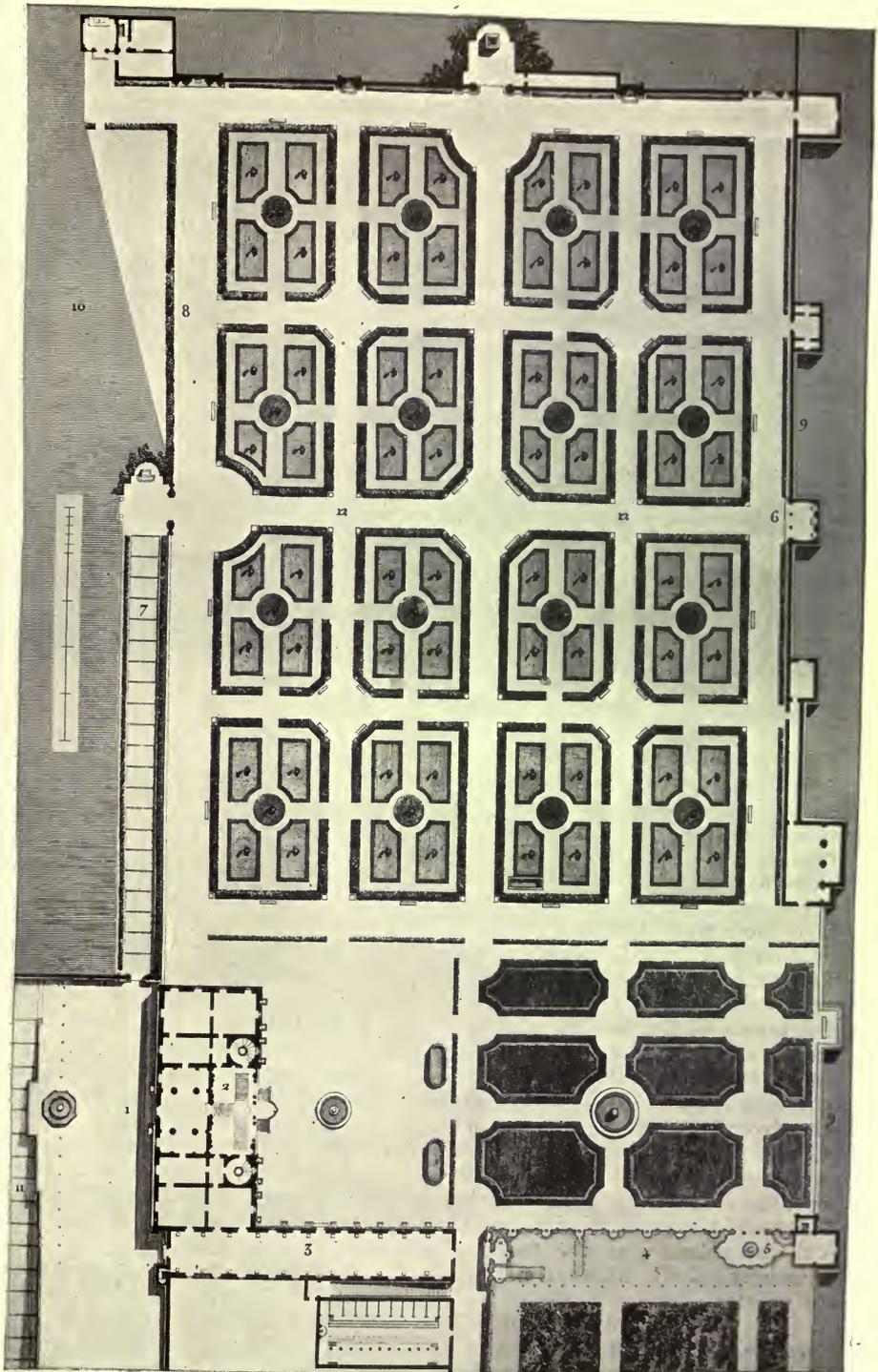
low façade, relieved by the panels of white marble, is still further enhanced by contrast with the shadows cast by the wings and by the deep shade within the portico.

The Villa Medici marks a new treatment of the façade, or rather, it is an expression of a different conception of villa architecture. The Farnesina had been treated in a dignified and monumental style which savors of the palace; here for the first time the architecture shows that the villa is considered rather as a casino or pleasure-house than as a palace. In the proportions of its masses as in its decorations one may plainly see a striving for picturesque effect. Such being the case one cannot justly criticise its composition or design, but must confess that the architecture is not only charming, but is well adapted to its purpose.

The prominence given to the many architectural fragments which adorn the house and the grounds is another evidence of the attention which was lavished upon all that appertained to classic art. This building exercised a great influence upon the architecture of subsequent villas, many of which, such as the Villa Pamphily and the Villa Borghese, employed ancient bas-reliefs in the same manner, while in many others decoration in plaster was used to obtain the same effect.

In 1801 the villa, which had for many years belonged to the grand dukes of Tuscany, became the Roman home for the French Academy of Arts, and it is due to this fact that the building and grounds have been so carefully preserved.

The traveller who visits Rome to-day knows the Palatine only from its ruins, which the excavations of the last thirty years have brought to light. On every side are the broken arches, great piers and gloomy vaults which once supported the palaces of the Caesars, while on the summit are the ruined walls and foundations which made the oldest of the Roman hills renowned for its magnificence. In the middle of the sixteenth century the Pal-



PLAN OF VILLA MEDICI, BY PERCIER AND FONTAINE.



THE VILLA FARNESINA ON THE PALATINE.

atine presented a very different appearance, for its ruins, now so naked, were then clothed with ivy and concealed behind the foliage which covered the hill and gave it much the same aspect which it wore when the shepherds from Alba Longa selected it as the site of their new city.

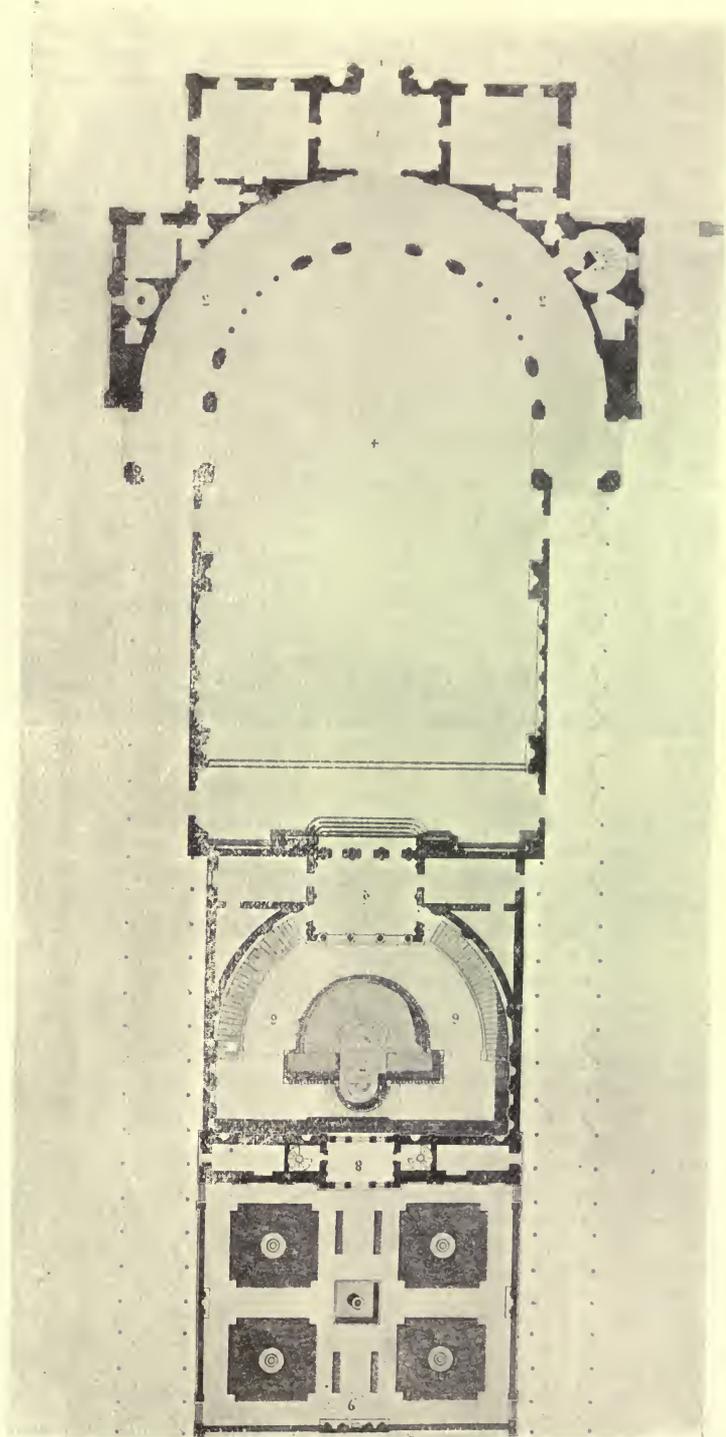
What site could be more rich in historic associations? The level plateau, whose very soil teemed with fragments of the palaces of the Caesars, overlooked the city of which the most striking landmarks were still those of ancient Rome; to the south, the Aventine with the ruins of the Circus Maximus, to the north and west the Forum and the Capitol, to the east the Coliseum, and the arches of Titus and Constantine still stood to recall the splendor of the past and to encourage the builders of new Rome to greater efforts.

Such was the spot that Paul III. selected as the site for a villa, which was to be planned on the largest scale. Accordingly under his direction Vignola, the favorite architect of the Farnese

family, laid out all the northeastern part of the hill in extensive gardens. To him is also due the credit for the skillful arrangement of ramps and terraces, of fountains and grottos, which, with the contrasting plots of turf or shrubbery, make the ascent of the hill more than usually attractive and the famous entrance of the Farnesiana on the Campo Vaccino.

The great casino was never built, for in 1549 Paul III. died, and the work was interrupted when the approach alone was completed, as his heir, Cardinal Alexander Farnese, was too greatly involved with his villa at Caprarola to continue a work only just begun. In 1612 two large aviaries, covered with low glass domes, were erected above the grotto from plans by Rainaldi.

In later years the domes were removed, the court, which separated them, was enclosed, and the whole roofed as a single building was transformed into the casino, shown in the illustration. The walls of the approach, of the terrace at the side, and of the



PLAN OF VILLA PAPA GIULIO, BY PERCIER AND FONTAINE.

casino itself, which now appear bare and unfinished, were once decorated with paintings in sgraffito, the niches were filled with statues and the grottos were green with water plants, so that the effect was very different from that now produced.

In 1861 the villa was purchased by Napoleon III., under whose patronage the excavations in the Farnese gardens were begun. These have been continued with great energy under the Italian government. The gardens have now completely disappeared, and the casino serves as an office for the director of the archaeological commission.

At the beginning of the fifteenth century Cardinal Fabiani di Monte possessed a vineyard lying to the north of the city, on the Via Flaminia. Here he determined to erect a villa in accordance with the fashion of the day. To this end he commissioned Jacopo Sansovino as his architect, under whom the so-called Vigna was begun. The sacking of Rome in 1527 by the Constable of Bourbon interrupted the work and necessitated the appointment of Peruzzi in place of Sansovino, who had fled to Venice. The death of the Cardinal in 1533 caused the work to be postponed, until his nephew and heir, having been elected Pope, in 1550, under the name of Julius III., wishing to emulate the example of his predecessors determined to erect a pleasure-house which should surpass all others in its magnificence.

Much doubt attaches to the question who were the architects, and what part each took in the construction. It now seems probable that the Pope himself planned the general disposition and character of the building; that these ideas were embodied into sketches by his friend Vasari and submitted to Michael Angelo, who made many changes in them. At Vasari's request Vignola was appointed architect, and to him must be attributed the credit of the building, for there is in the architecture neither the weakness of Vasari nor the independence of canonical laws, which marks the

work of Michael Angelo, while one can recognize everywhere the ingenious motives, the elegant style, and the charming details which characterize Vignola.

Limited by the necessity of adhering to sketches which he felt it advisable to modify in many ways, restricted by the surveillance of two associates whose advice the Pope preferred to his own, and hampered by the whims and caprices of the Pope himself, Vignola found the position untenable and resigned it before the building was completed.

The plan of the villa shows a disposition which at first glance seems fanciful if not capricious, but which on examination exhibits careful study and unusual ingenuity, for nothing essential has been omitted and yet one can discover nothing which is not the expression of a necessity.

The pleasure-house of a Pope should be dignified and severe on the exterior, while the interior should be rich and palatial as becomes the dwelling of a sovereign, and decorated with the work of the best artists, whom it was the pride of the Pope, as patron of the arts, to encourage. It should contain great rooms for state receptions, smaller rooms for habitation, and finally apartments so placed as to insure quiet and privacy for the Pope himself. All these conditions are here fulfilled. In the main building one can recognize the public rooms by their size and prominent position, while in the wings are the private apartments, which are properly of a smaller size. The façade also perfectly expresses this distribution.

In the first story are disposed the large hall for the guards, waiting rooms and minor dependencies, in the second are the great halls for the receptions, and in the wings the bedrooms, the library and the study of the pontiff. In the entresols are the rooms for the secretaries and other persons attached to the immediate service of the Pope.

The insignificance of the main staircase, or rather ramp, for there are,



FACADE OF THE VILLA PAPA GIULIO.

properly speaking, no steps, which is not seen from the main vestibule, and can only be entered from the court, may be unfavorably criticised, but it must be remembered that if it had been placed in the main building it would have seriously interfered with the disposition of the important rooms in the upper story, and would have allowed the sounds from the vestibule filled with servants and coaches to ascend to the rooms above.

Moreover, as the corridors in the first and second stories, which it serves to connect and which, more than any others, were filled by the promenaders, had received the most elaborate decoration, it was well to exhibit their beauty and magnificence to the guest on his first arrival, so that before he reached the audience chamber he might be suitably impressed by the grandeur of this noble dwelling.

Behind the main building is the court of honor, on which the broad semicircular corridor opens, whose

lines are prolonged by a colonnade of antique Ionic columns of different colors. Here the members of the papal court might congregate during the receptions which it was the pleasure of Julius III. to give in the villa in which he took such pride.

This court, while actually of small area, has the rare merit of appearing much larger than it really is. Several reasons unite to produce this effect, so unusual that it deserves attention. The court is large when compared with the shallowness of the main building and with the scale of the other buildings by which it is bounded. Moreover, while the main building is of two stories, those at the end of the garden consist of but a single story and an attic, so that the length of the court is greatly exaggerated; this effect is increased by the arcades and the little Ionic columns which form the enclosing walls, so that the eye, following the successive arches, exaggerates the distance. The lines



COURT OF HONOR, VILLA PAPA GIULIO.

of the semicircular colonnade in which the observer stands, all tend to increase the illusion. Finally, the deep shadows of the colonnade contrast with the flood of light which fills the court, and gives the sides a certain uncertainty as to the limits, which increases the apparent width.

At the end of the court were the loggia and pavilion reserved as the private retreat for the Pope. From this open loggia two winding staircases gave access to the lower court, in whose seclusion the Pope might enjoy the fresh air protected from the wind and secluded from the gay crowd which thronged the court of honor. On the opposite side is an open loggia which gives access to the private gardens in the rear, and which affords a glimpse of the villa and the court of honor, seen through the loggia which separates the two courts.

If Vignola's design had been carried out these gardens might have been reached by two galleries, which

were to have continued the lines of the semicircular colonnade, but the capricious Pope compelled the abandonment of the scheme after the work had been begun, and necessitated the construction of the two lateral walls, which so greatly injure the composition of the main façade.

The distribution of masses and the proportions of the stories of the façade mark the sure and skillful hand of a master. The heavy rustication of the entrance, which is also used in the windows, gives an appearance of dignity and security, which, while offering a strong contrast, is not out of harmony with the lightness and elegance of the second story.

It must be admitted, however, that the windows of the first story are of insufficient size and that the transition from the heavily rusticated Tuscan order to the richness of the Composite is too distinct and that the openings in the niches of the second story are unskillful makeshifts. Vignola him-



LOWER COURT OF THE VILLA PAPA GIULIO.



ENCLOSING WALL OF THE COURT OF HONOR, VILLA PAPA GIULIO.

self felt this, for an ancient drawing shows that these windows were concealed behind statues.

The court façade is even more successful, especially when we consider that the architect was obliged to utilize columns which, taken from ancient buildings, differed from one another in size and color. The whole composition is most happily massed, and the details, with the exception of the large window by Michael Angelo, are as ingeniously adapted as they are elegantly proportioned.

The walls and ceilings of the portico, the upper gallery and the principal rooms are decorated in fresco by the greatest artists of the day, among whom may be mentioned Taddeo Zuccheri and his pupils Prospero Fontana and Georgio Vasari.

These frescoes were executed in brilliant colors with great freedom of touch well suited to the decoration of a pleasure-house. The vaults are covered with a tracery of vines, flowers and grapes, among which disport children and youthful fauns and birds of brilliant plumage.

The closed colonnade which continues the line of the portico was no less elaborately decorated. Here the medium is stucco, which is employed in much the same way as in the Villa Madama, though the relief is higher and the design more sober, as befits the open air. The spaces between the columns were once filled by statues since removed to the Vatican.

The open loggia at the end of the court of honor was originally closed, insuring greater privacy for the private apartments of the Pope. It was while this loggia was in course of erection that Vignola resigned his position as architect. Ammanati, who was appointed in his place, wishing to stamp his own individuality upon the work, changed what had been designed as a simple corridor into the wide loggia which exists to-day. To still further mark the point at which he assumed control, not content with carving his name upon one of the pilasters, he designed

the two new doors in quite a different style, which by all laws of symmetry should have corresponded to the others.

From this loggia two ramps descend in a wide curve to the lower court. The design of this court is quite inferior to that of the other buildings, lacking, as it does, any controlling and determined scheme; certain portions seem crowded with motives which bear no relation to one another, while others are too bare and severe.

It is easy to discover here the instability which characterized the policy of the Pope and the different tastes of the three artists to whom he confided the work.

Beneath the larger loggia is a room whose vaulting is decorated with the most beautiful frescoes. The elaboration which this minor room has received is not surprising, as it must have been a charming retreat during the heat of the day. Here one could hear the water splashing in the nymphaea below and the singing of the birds within the two aviaries in the panels of the opposite wall.

The Pope made the villa his habitual residence, and established here all the magnificence of the papal court. Leaving the Vatican, it was his custom to proceed up the Tiber in a stately barge, attended by the officers of his household.

Arrived at the gardens, which then reached to the river's edge, he was met by the gay company which had ridden by the Via Flaminia, and proceeding to the main apartments of the casino, he received the princes, prelates and distinguished men to whom the Pope was never tired of displaying the beauties of his villa.

He lived but a few years to enjoy the luxury which he had been at such pains to create. On his death the buildings were abandoned and the treasures dispersed. Pius IV. restored the villa to serve as a dwelling for foreign ambassadors. The buildings were greatly injured during the war with Naples, when they were occupied



PAVILION, LOWER COURT AND NYMPHAEA.
Nos. 5, 6 and 7 on Plan of Villa Papa Giulio.

as a hospital by the Austrian troops. Restored again under Clement XIV. and by Pius VI., the buildings under Leo XII. were used as a veterinary college. In 1830 they were rescued from this ignoble use, but only to remain for many years unoccupied, until 1888, when they were fitted up as a museum for Etruscan curiosities.

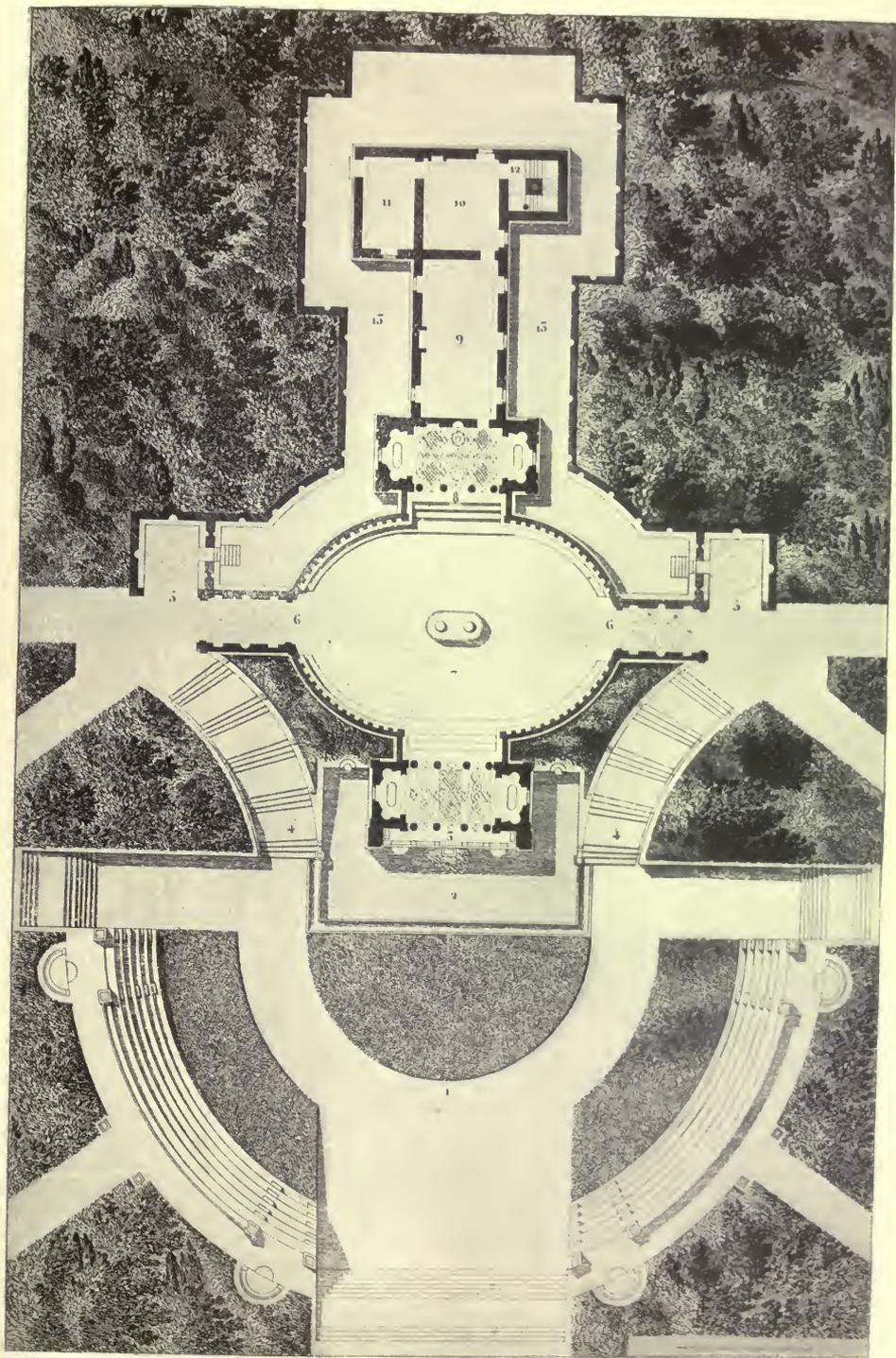
The example of Julius III. was followed by his successor, Pius IV., Bernardino de Medici. That pontiff, on his election to the chair of St. Peter, in 1559, commissioned his architect, Perro Legorio, to erect upon the level piece of ground which adjoins the Vatican upon the west, the villa called from its builders the Villa Pia.

This spot had been occupied in classic times by the villa and gardens of Nero, whose casino was probably upon the rising ground where now is the Casino del Papa. The proximity of the Vatican removed the necessity for dwelling rooms, so that the casino

is rather a resting spot among the gardens than a dwelling. Here Pius IV. might find seclusion and quiet, and here he gave many of the splendid entertainments for which his reign is famous; indeed, it was erected for that purpose, as at that time no woman could enter the Vatican. Here, also, Leo XIII., in his self-imposed imprisonment, enjoys the air within the limits of the Vatican.

The property is divided into two nearly equal parts. The lower is laid out in the straight walks and beds of geometrical design which characterize an Italian garden. A high terrace surrounds it on three sides, whose wall protects the garden from the north wind, while it offers opportunities for grottos and niches, and for the cultivation of orange trees against its side.

The southern portion is treated in a different manner. Here nature is less restrained, and the pines have been



PLAN OF VILLA PIA, BY PERCIER AND FONTAINE.



COURT, PORTICO AND CASINO, VILLA PIA.
Nos. 6, 7 and 8 on Plan.

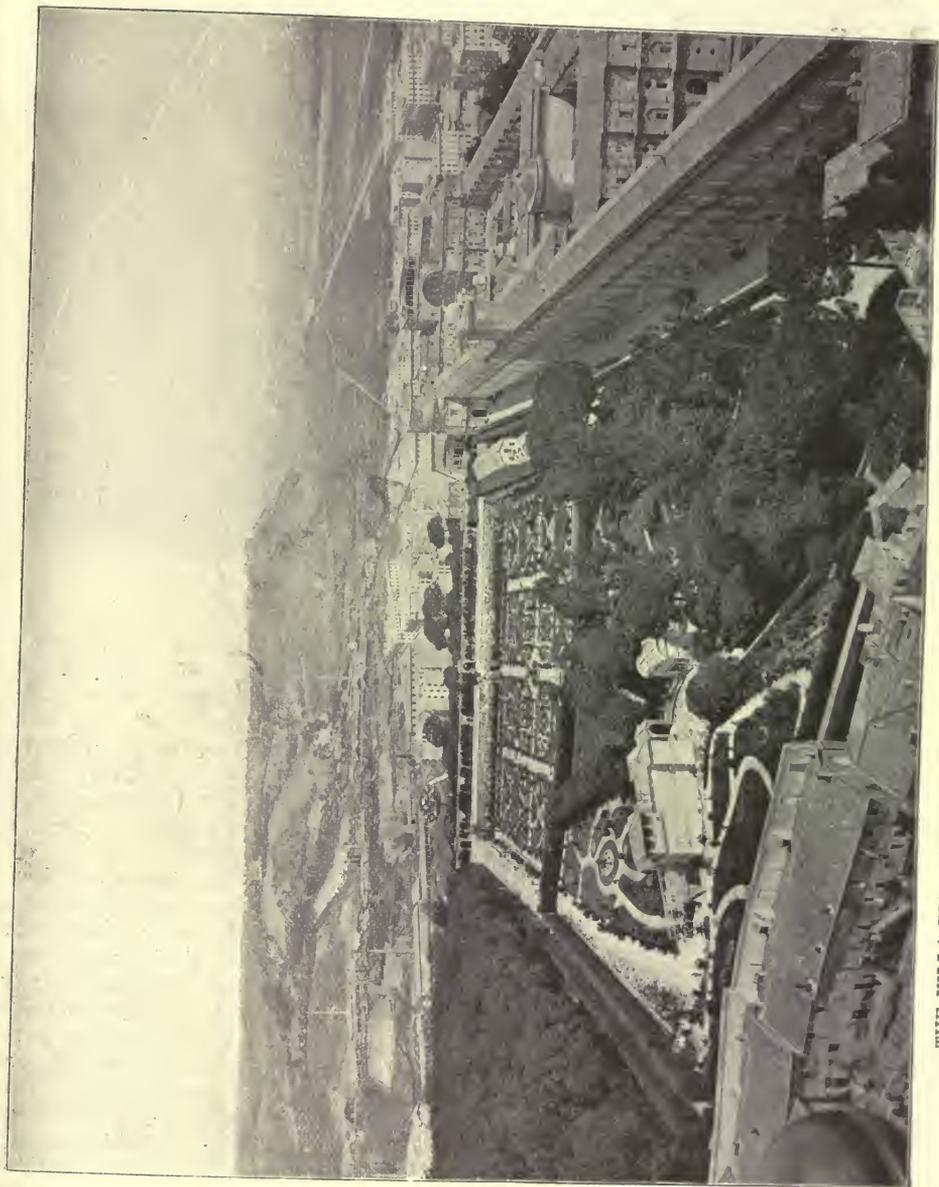
allowed to grow at will; but the ancient hedges, which line the walks, show that here also the planning has been carefully studied. The paths radiate from an open space on which fronts the loggia; behind this is an open elliptical court entered from exedras in its longer axis and the casino proper, which is opposite the loggia.

The architecture of the basement story was fantastic as becomes a grotto. Four fauns, now destroyed, of heroic size, adorned the piers, and between them in panels of decorated stucco are two antique statues, while a third fills the central niche.

The architecture of the loggia above, while decorative, is much more dignified. Eight antique columns of Numidian marble support the vaulted ceiling, which is richly decorated with plaster work. The apses at the ends contain two fountains of carved marble, whose jets are thrown in contrast against the light of the open windows behind.

This loggia is a charming retreat, under whose shade can be enjoyed the splashing of the fountains and the view of the trees in the garden below—all the more refreshing by contrast with the brilliancy of the sunlight, which fills the marble-paved court and is reflected from the light walls of the casino opposite. Standing on the little balcony one can see the grottos and statues of the basement mirrored in the basin below, a favorite device of the architects of many of the villas.

The centre of the elliptical court is filled by a marble fountain, and around the sides are marble seats protected from the wind by the low walls which connect the loggia and the casino. These walls are broken midway by the two little buildings which serve as exedra. These are also ornamented in stucco mosaic on both their court and garden façades, but it is on their interior walls and vaulted ceilings that the greatest elaboration is displayed. These are covered with delicate orna-



THE VILLA PIA, ADJOINING THE VATICAN, AS SEEN FROM THE DOME OF S. PETER'S.



MAIN FACADE, VILLA BORGHESE.

ment in relief hardly inferior to that in the Stanzas of Raphael or in the Villa Madama.

The casino, a two-storied building, whose façade is ornamented in a manner similar to that of the loggia, is at the opposite end of the court.

The Villa Pia illustrates the possibilities which lie within such a poor and common material as plaster in the hands of a master. Its very cheapness necessitated an elaborate treatment, while the ease with which it could be moulded permitted an excess of decoration which the cost of a more valuable material would have prohibited.

The introduction of bas-reliefs as panels in the façade had set the fashion for the decoration of surfaces which had previously been left bare, a fashion which the artists were glad to encourage, as the plastic and yet durable material tempted them to display their skill in modeling. So fascinating was it that it was soon carried to excess, and every surface of wall, pilaster or vault, whether within or

without the building, was covered with ornament in relief, which has all the freedom and brilliancy of a freehand sketch.

This excess is much more suited to a little casino, intended wholly as a pleasure-house than in buildings large and palatial, as are many of the villas which are thus treated.

The Villa Borghese is perhaps better known than any Roman villa, a reputation gained partly from the large collection of paintings and antiques which are here exhibited, partly from the magnificence of the casino itself and partly from the extensive park which, on certain days, has always been thrown open to the public. The visitor passes through a gate between two lodges, which resemble classic temples, and ascends a shady driveway which winds through the lower park. On one side is a common, and on the other the private gardens which are laid out in the Italian style and surround a little lake.

Passing a second gate designed to



TEMPLE AESCULAPUS, WHICH TERMINATES AN AVENUE OF THE VILLA BORGHESE.

imitate Egyptian pylons, the upper park is reached. This is laid out in a more natural style with groves of pines and oaks, but even here a systematic scheme is evident, for the paths and driveways take the form of avenues and hedged alleys, with here and there a ruined temple, a piece of statuary or a fountain to break the vista.

These artificial ruins show to what extent the love of classicism had pervaded the artistic world, for in this villa alone there are four of these mimic ruins.

The casino is placed on a hill in the most remote portion of the park. Before it is a square court surrounded with a balustrade where the carriages might stand, or where the guests might find seats. The entrance is between two fountains, which spout on every side from the terminal piers of the balustrade. The casino was erected in 1615 for Cardinal Scipio Borghese, nephew of Pius V., from designs by Vasanzio.

The façade is ornamented with decorations in plaster relief, in the fashion set by the Villa Medici. Between the two projecting wings is a spacious vestibule, the walls of which are ornamented with bas-reliefs and statues. The other rooms of the villa are characterized by the splendor and magnificence of their decorations. The doorways are of colored marble, the walls are hung with silk or are covered with incrustations of some precious stone, such as malachite, spar, porphyry, Siena and other colored marbles. The vaulted ceilings are adorned with frescoes or with gilded reliefs. The rooms are filled with antique sculpture, with vases, statuary and sarcophagi, and on the walls are hung the best private collection of paintings to be found in Rome.

In one of the galleries there hangs a little water color, which shows the casino as it appeared in 1640, before the restorations of 1782 had removed many of the bas-reliefs. The court before the casino is filled with gilded



LITTLE TEMPLE AT THE INTERSECTION OF TWO WALKS IN THE VILLA BORGHESE.

coaches, drawn by four or six horses heavily caparisoned. Here and there are sedan chairs, attended by a band of liveried servants, and on the marble seats or leaning over the balustrade is a gay company of cardinals and princes in the brilliant costumes of the eighteenth century.

Things wear a different aspect now. Since the financial difficulties which overwhelmed Prince Borghese some five years ago, the villa has been in the hands of his creditors. The driveway, which surrounds the common, is now used as a trotting track, in another part a bicycle course has been fitted up, near by is a dairy, and in the pri-

vate gardens is a menagerie. The casino is employed as a museum for the collection of paintings transported hither from the Borghese palace. The park is used by picnickers, and the drives are open to cab and carriage alike.

In spite of this desecration the beauty of the villa has not been permanently injured, nor is it now greatly affected, for the park is so large that, the entrance once passed, the presence of the intruders is not conspicuous.

By far the largest villa in Rome is the Pamphily Doria, erected in 1644, by Alessandro Algardi for Prince Pamphily, nephew of Innocent X. It



MAIN FACADE, VILLA DORIA-PAMPHILI.

lies to the southwest of the city, and occupies the site of the gardens of the Emperor Galba.

At the entrance a triumphal arch spans the driveway, which winds up the crest of the hill, commanding on one side a fine view of St. Peter's and on the other the meadows of the villa which adjoin the casino and the gardens on the east. The latter have been skillfully adapted to the sloping ground by means of a succession of terraces. On the uppermost is the casino, the facade of which is ornamented with the reliefs which characterize so many of the casinos of the seventeenth century. It shows, however, a tendency towards the more architectural if less picturesque treatment of a later period.

Behind the villa, and at a lower level, is the garden, which is laid out in beds of fantastic design and basins, which reflect the orange trees trained against the surrounding walls. At a still lower level reached by two flights of stairs is a broad expanse of lawn. broken here and there by a statue, a fountain or a group of palms.

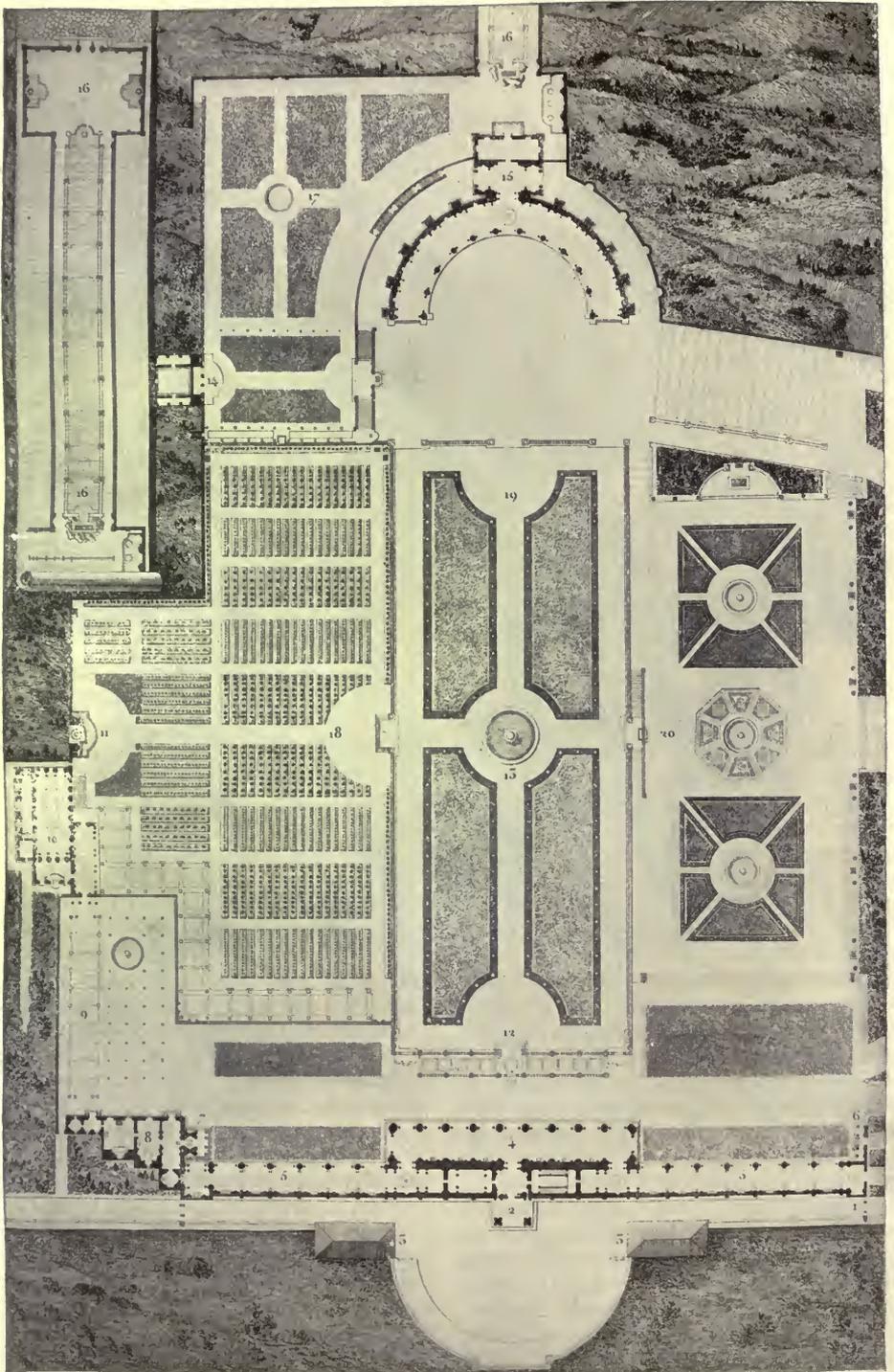
The walls, which the arrangement of

the terraces necessitated, have been so skillfully treated with niches full of green plants and statuary and the occasional deeper recess of a grotto, that so far from detracting they greatly add to the beauty of the gardens.

By far the greater area of the villa is devoted to an extensive park, which is a favorite resort of fashionable Rome on the days that it is thrown open to the public. Not far from the casino is a grove of pines, covering many acres. These are said to have been planted by Le Notre. The rest of the park, which includes a small lake, has received a much more naturalistic treatment.

The most modern of the Roman villas of importance and the last to be considered in this article, is the Villa Albani, erected in 1760, by Cardinal Alessandro Albani, from designs of Carlo Marchionni.

From the entrance a broad path, bordered with box hedges, leads to the fountain, which occupies the centre of the terrace, which is thus entered on its shorter axis. To the left is the casino, with the galleries which flank it on either side; opposite is a small



PLAN OF GARDEN AND BUILDINGS, VILLA ALBINI, BY PERCIER AND FONTAINE.



GARDEN FACADE, VILLA ALBANI.

building, known as the *Bigliardo*, while on the right is the circular-shaped "*Caffe*."

These buildings were designed to receive the extensive collection of antiquities which Cardinal Albani had brought together under the direction of his friend Wincklemann, the celebrated German archaeologist, and, though nearly 300 of the more valuable pieces were carried off by Napoleon, there are still enough remaining to tax the capacity of the buildings and to decorate the gardens.

The illustration shows the formal architecture of the buildings, and the arrangement of the gardens, which are laid out in the prim style which characterizes the later Italian gardens.

So numerous are the villas which still exist or have been but lately destroyed that it is impossible to discuss them all within the limits of a single article. The article would be incomplete, however, if no mention were made of the many famous villas which were destroyed during the extensive

building operations which marked the early days of the present government.

The value of Roman property doubled and quadrupled in a few months, so that it was not strange that the temptation proved too strong for the owners of the parks and gardens which were near enough to the city to be affected by the unexampled demand for real estate. Many of the casinos were demolished and the property thus thrown upon the market was soon covered by the blocks of tenements and apartment houses which form the newer portion of the city. Among these were the *Villa Negroni*, built by Fontana, as early as 1570; the *Villa Ludovesi*, famous for its collection of antiques, erected in 1623; and the *Villa Geraud*, erected in 1650. It may be noticed that all of the villas described in this article belonged to the members of the papal aristocracy. This is due to the fact that the patrician aristocracy, poorer, perhaps, than the others, and richer in land than in pride, did not hesitate to demolish the



THE GARDENS OF THE VILLA ALBANI, FROM THE CASINO.

villas which had borne their name for centuries, so that to-day none remain. Among these may be mentioned the Villas Patrizi, Sciarra, Massimo, Guistiniani, Campana and San Faustino.

Even more dishonored are the villas whose gardens have been sold, but whose casinos still stand to serve some other purpose, such is the Altieri, now used as a nunnery, and the Barberinni, which has been converted into an insane asylum.

Even with the loss of these many examples, we are able to trace the continuous development of villa architecture from its first beginnings. With this object in view, only such villas have been here considered as mark some new departure or serve to bridge over some gap in the series.

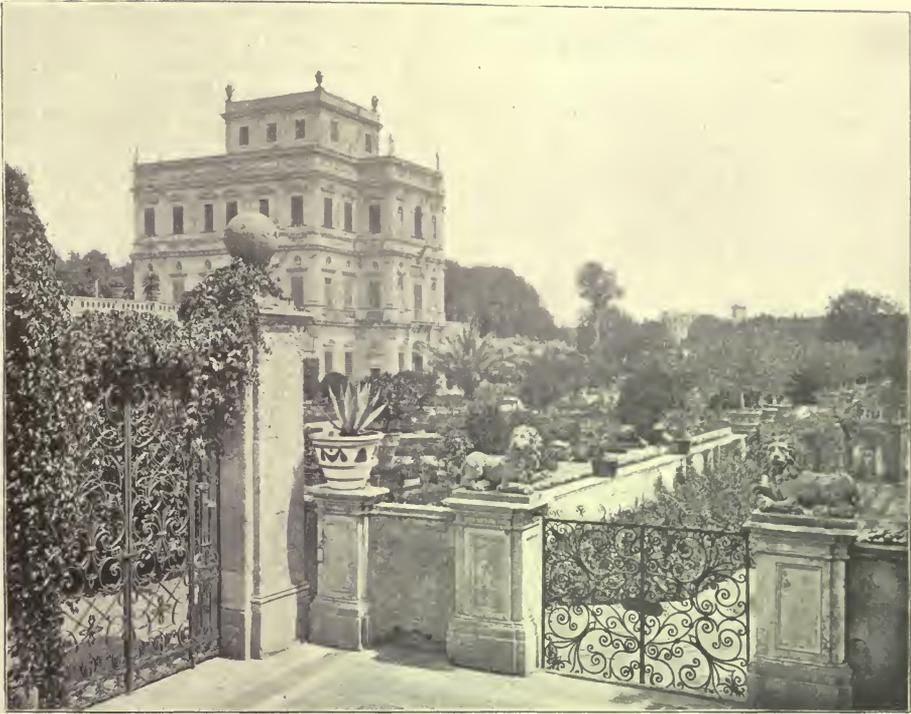
It may be well to take a short review of the subject, that the main facts, obscured, perhaps, by too close observation, may appear more distinct in retrospect.

The Villa Farnesina, erected in 1510, shows plainly the influence of

the palace architecture of the day. In fact it differs from a palace only in the two large loggias of the first story, in the lightness of the details and in the elegance of the interior decoration. The grounds, though laid out on architectural lines, exhibit none of the elaboration which characterizes the later gardens.

The Villa Medici, 1540, shows a new departure in that the façade is abundantly adorned with reliefs, most of which are antiques, while the others in plaster are used rather to fill out the deficiencies than as a new material. While the level nature of the grounds did not invite a complicated arrangement of terraces, the ramp and terrace are still present as important features. A portion of the grounds is devoted to a park, and the gardens have the architectural outline, the box-hedged paths, the statues and fountains which characterize the Italian garden.

The Farnesiana, begun about 1545, and never completed, is interesting as



GARDEN OF THE VILLA PAMPHILY.

showing the application of an extensive system of ramps and terraces to a villa within the limits of a city.

Villa Papa Giulio, 1550, is important as exhibiting the highest perfection and elaboration of plan of any of the casinos. For the first time there is a succession of interior courts, loggias and nymphaea, all contained within the limits of the casino itself. Plaster reliefs are here used as a legitimate medium for exterior decoration.

In the Villa Pia, 1561, is seen a casino, erected as closely as possible upon the lines of an ancient Roman villa of Imperial times. The plaster reliefs used with moderation in the Villa Giulio, are carried to the greatest development both as to extent of their use and the skill of their modeling. The gardens show the introduction of a new treatment. Instead of the division into broad masses of grass or shrubbery, surrounded by high hedges of clipped box or laurel, we find small beds of fantastic shape, outlined with

a low hedge of box and filled with flowering plants.

The Villa Borghese, erected in 1615, exhibits a casino whose exterior treatment indicates a return to the more palatial architecture which characterized the earlier villas. The façade is still ornamented with plaster reliefs, but these are on a larger scale, and are used as architectural motives rather than as pure ornament. The interior is considered rather as that of a palace than of a villa. The walls and floors are of marble, and the frescoes, instead of the half rural and playful designs of the earlier work, are treated with a grandeur and magnificence in keeping with the new conception. The grounds consist of common and park, in which are disposed temples, and fountains on a larger scale than hitherto employed.

The Doria-Pamphily, erected in 1644, shows a similar treatment with the added charm of a terraced garden, a portion of which is treated in the

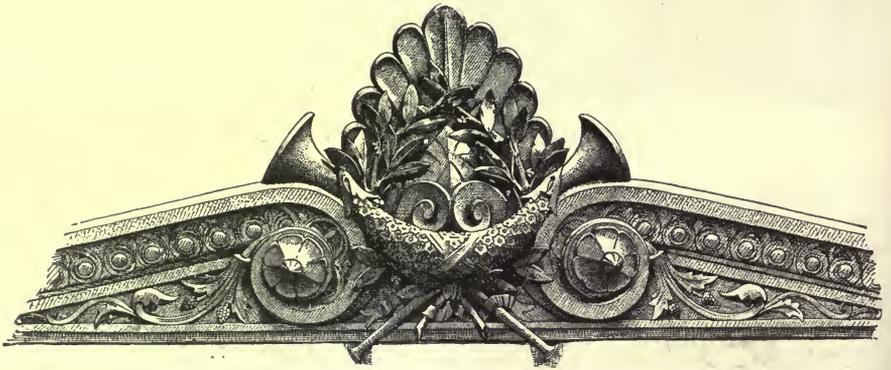
style of the later Italian gardens, while a portion is devoted to a simple expanse of lawn.

The Villas Geraud, Patrizi and Bolognetti, which were erected during the following century, have all been destroyed, so that the development to the most dignified palatial architecture which characterizes the Villa Albani, erected in 1760, cannot be traced.

The illustrations show the features which impart an individuality to each of these villas and convey more clear-

ly than words the charm which attaches to these monuments of an art and a social life which flourished and have passed away together. In another article the villas of the suburbs of Rome, such as Viterbo, Tivoli and Frascati will be considered, where unconfined by limits of space and with greater opportunities of site, the gardens, which are the greatest attraction of the Italian villa, reached a development which has made them the inspiration and models for the landscape architects of every country.

Marcus T. Reynolds.





MONTE PELLEGRINO, PALERMO, SICILY.

SICILY, THE GARDEN OF THE MEDITERRANEAN.

WITH its vineyards, orange groves and olive trees, its pasture lands and mountain fastnesses, Sicily has been, from very ancient times, the prize and stronghold of contesting tribes and nations. And, notwithstanding the somewhat primitive cultivation of its soil, the island to-day sends out two-thirds of all Italian wines and most of the green fruits of all Italy. With its irregular coastline and its good harbors, it has attracted the fleets of ancient Carthage, of Greece, Imperial Rome, and of the Orient. It has been the battlefield of many nations, and its history, therefore, is most varied and eventful.

In the eleventh century, B. C., the Sikels, of Latin origin (from whom most likely the present name of the island is derived), crossed the Straits from the mainland of Italy and found upon the island the so-called Sikans. But three hundred years later, the Sikels were hindered by the coming of the Greeks from reaching the same independence as their kinsfolk in Italy. The proper history of the island

commences with the Greek adventures in the eighth century, B. C., and the Greek history is the most brilliant of all. Art, science, poetry, all that constituted the intellectual life of the Greeks, here became naturalized. These Greek colonies became so many independent cities without any allegiance to the parent state.

In the beginning of the third century, the Carthaginians were successful conquerors; and the Marmatines (Campanian mercenaries) who had possessed themselves of Messina, invited the Romans to protect them against the Carthaginians. This Roman interference was the cause of the first Punic war, and the Romans conquered Syracuse 212 B. C. After the downfall of the Roman Empire, the island fell into the hands of the Goths; but was conquered by the Byzantines under Belisarius, and remained under Byzantine rule until the ninth century, when it was invaded by the Saracens.

Toward the latter part of the eleventh century, the Normans were successful invaders, and Roger I., son of

the Norman Duke Roger, was crowned king of the two Sicilies (Naples and the island) in 1127. He was the first monarch who had ever ruled over the whole of Sicily. Through the marriage of Henry VI., of Germany, to Constance, daughter of King Roger I., the crown fell to the German Emperor, and later to his son, Emperor Frederick II. Manfred, a natural son of Frederick II., upon an unfounded report of the death of Conrad (so-called Conradin), heir in succession to the throne, and grandson of Frederick II., declared himself king. But the Popes took this opportunity to assert their lordship and bestowed the kingdom upon Charles of Anjou. Manfred died heroically, near Benevento, in defense of the Sicilies; and Charles entered Naples and later put to death the youthful Conrad. Under the rule of Charles of Anjou were enacted the wars of the Sicilian Vespers. Later, Spain, Austria, and the Kingdom of Naples have been possessors of Sicily. But in 1860 Garibaldi landed at Marsala, entered Palermo, crossed to Calabria, and marched upon Naples and annexed the whole, under the house of Savoy, to the new Kingdom of Italy.

Such, then, is the varied and thrilling history of the island to which we were sailing across the Mediterranean toward the beginning of the month of May. The morning of our arrival upon the island was a beau-ideal of a Sicilian May-day. The blue blue waters of the Mediterranean, the cloudless sky, the blue mountains appearing as we approached, the quiet early sunlight, and the fresh, sweet air—as our ship gently rode the waters, were inspirations in themselves. Palermo, in its tints of pale brown, greys, and creamy whites, and its "eretrine" trees along the Marina a mass of red blossoms, came into sight. Monte Pellegrino, in greyish blue, was on the harbor's right. With an outline as bold as Gibraltar, the mountain rose majestic from the sea. Our horizon, peacefully bathed in the quiet morning light, was the high hills and higher mountain peaks.

Gently, as we sailed the seas, the city came distinctly into view. What were mere spots among the delicate tints of the city grew to be balconied windows. The classic dome of the Cathedral stood boldly forth in the midst of all, and its Gothic towers rose high also in graceful outline.

The embarkation was but little trouble; and after a nominal examination of our baggage, we were at liberty to take the services of one of the many men waiting with their traps. Through white streets lined with balconied houses, past round-arched doors, and narrow streets, whose vista was a conglomeration of balconies and clothes lines, gay with color, stretching from house to house, and flowers and bright-eyed Sicilians withal—at last we arrived at our destination.

One thinks but little of ascending flights of stairs in Sicily, and we were soon initiated into climbing the three flights to the topmost story of the apartment house in which was situated our *pension*. But, having reached the top, the cheerfulness of the interior repaid one for the climb, and the affable manners of our English host and hostess made one feel at once "at home," and willing to dream away the days of life amidst such pleasant surroundings.

The large casement windows of our rooms opened upon the always present balconies, where flowers were freshly blooming, and one saw the sea beyond the house-tops. Below our balcony were two Sicilian house-top gardens. The floors of these were tiled, for tiles are cheap in Sicily, and where one does not find a floor of stone, either within or without a house, one generally finds glazed tiles. The effect is always clean and pretty. These gardens were no exception; and the flowers in the boxes were blooming luxuriantly, and the rose vine hung full of yellow blossoms on the white wall below. A goat and some cackling hens lent life to the garden scene—and the dark-eyed Sicilian matron and her bright-eyed laughing daughter, who, on starry evenings, took a breath of sea air from their house-top



LACE-MAKERS IN POOR QUARTER OF PALERMO.

garden, were no doubt as happy, with their macaroni and flowers, their chickens and goats as their richer sisters in the villas, with the palm trees and swans, of the fair country around.

In consequence of the many different nations that have had possession of the island at various times, there is much variety in the examples of the architecture extant. The Greek has left the most beautiful remains at Selinunto, Girgenti, Syracuse and other places; the Roman many examples; and at Palermo many traces of the works of the Goth, Byzantine, Saracen and Norman are found. Of course, the Renaissance occurs in every town, and there are few fields, if any, in which to-day so many different examples remain side by side, or combined within the same building. Traces of the Classic, the Gothic, the Byzantine and the Saracenic are frequently found within the same building; and a study of the buildings themselves is closely connected with the very history of the island.

All Sicilian sea towns, however

small, have their "marina," which rises from the water with well built walls and pavements, by the side of which are anchored the merchant marine or smaller boats. Where the town is of maritime importance, as at Palermo or Messina, the "marina" rises to great dignity, and is lively with the commercial business of the city. The marina usually extends along the sea beyond that devoted to its commerce, and affords a road of pleasure and of beauty.

I know not how to tell of the air of loveliness around Palermo, with its two hundred thousand and more inhabitants, its picturesque gateways, its huge Cathedral, rich in details, its three hundred churches with their treasures of mosaics and art; its gardens; its streets, where can be seen the Sicilian in all his characteristics, and then its beautiful marina, curving on the sea—the marina, where one rides, one walks, one sits or meditates and sees the waters just below rising in blue waves along the stone walls. Monte Pellegrino juts boldly forth into the



CENTRAL DOORWAY—CATHEDRAL OF MESSINA.

sky and sea, and the air is sweet with pleasant odors from the flowers of balconies and gardens. Here amidst the blue waters of the Mediterranean nature has made unto herself a garden, and the conquering nations as they have come and gone have left remains and traces of their characteristic arts.

The five unadorned domes of San Giovanni Degli Eremiti, erected by King Roger, about 1132, are of the true Eastern type, and shelter Norman work of strongest Saracenic influence. And from the beautiful ruined Gothic cloister surrounding the picturesque old well and garden, the domes look truly oriental.

But with the exception of the "Cuba" and "Zisa" at Palermo, which are very generally admitted to have been erected by the Sarcens, there is, per-

haps, little left of Saracenic work of older date than the Norman conquest of the island.

There are some very beautiful examples of Gothic work in Palermo—from the picturesque Gothic cloisters of San Giovanni to the more ornate cloisters of Monreale, which latter, although Norman in detail, especially in the columns, is distinctly of a Gothic spirit. San Francesco de Chiodari has a very beautiful Gothic façade, again with much Norman detail and influence, and has lately been restored. The Gothic work to be seen at Palermo, although generally with strong Eastern influence, is, with some exceptions, of simple, graceful design, with no exuberance of ornamentation. And, although the Cathedral has an incongruous later classic dome—in bold



SAN GIOVANNI, PALERMO, SICILY.



CHURCH OF SAN FRANCISCO, PALERMO, SICILY.

contrast to the very beautiful Gothic bell towers, which dome was erected in spite of the remonstrances of the Sicilian architects, yet the graceful Gothic forms remaining, together with the delicate details, attest, notwithstanding the later additions, the refinement of the workers upon the building as early as the twelfth century. The old bell towers, dating from the twelfth century, and connected with the Cathedral by two arches (restored), have a very picturesque effect. The broad gable to the south portico was added in 1450, but the character of the ancient building is well preserved in the

east end showing the (restored) black ornamentation.

From the Cathedral, through the Porta Nuova, is a short walk to the "Palazzo Reale" or Royal Palace. This latter has always been the site of a city castle. However, but one tower remains—the remnant of Norman times. Entering the Palace court and ascending the staircase we reach the Cappella Palatina, and are surrounded at once with all the splendors that art can give. The interior is forty-two feet wide and one hundred and eight feet long. The wooden roof, with ancient Arabic inscriptions, and distinctly

eastern in its treatment and decoration, is supported by the pointed arches below, and these in turn are borne by columns of polished granite and "cipallino." Many of the capitals are of the Roman period, a prize from ancient temples long since despoiled of all their art. Mosaics of the time of King Roger I., who commenced the chapel in the middle of the twelfth cen-

Surely this is a royal chapel—with a wealth of art dating from the Norman period, a richness of material, and a mediæval splendor unsurpassed by any other royal chapel. One stops and wonders if ever anything could be more beautiful, were ever marbles and porphyry more rich—could splendors of the Orient surpass them.

Near this chapel, so rich and royal in art, and through the Porta Nuova, the road leads to the Cathedral of Monreale (or the Royal Mount).

The road to the Monreale (less than four miles) is very beautiful. The morning of our expedition to the Royal Mount was as bright and clear a Sunday as ever shone in Sicily. The Sicilians were up betimes, and the road was lively with country folk making excursions to Palermo—that pride of all Sicilian hearts—and one of the fairest cities under sunny skies.

How different the scenes this day in May from that which occurred but little over six hundred years ago. Here, on apparently as peaceful a day, in the year 1282, occurred the very beginning of the wars of the Sicilian Vespers—the darkest blot in the eventful history of the island. It was then the ambitious Charles of Anjou, with his arrogant wife, at the suggestion of the Pope, Clement IV., had usurped the throne of Sicily, and later put to death the heir by right of succession, the youthful Conrad. For twenty years the Sicilians endured the unrighteous rule of Charles. But with no word of warning to their hated masters, they rose and enacted, on the 31st day of March, 1282, the terrible massacre of the Sicilian Vespers.

The French, whom Charles had brought into the island to rule the conquered and to sap the life blood out of those they ruled, and Sicilian men and women were on the road to Vespers. The Vesper bells were ringing sweetly, and, like a calm before the storm, there seemed to be no warning on that peaceful afternoon of the tragedy to follow. In submission the rule of Charles had been endured so long, and the hatred for him and his had been cherished so long in silence, that



THE TOWERS OF THE CATHEDRAL OF PALERMO.

ture, adorn the choir. The mosaics are Greek or Byzantine, and in combination with gold and rarest marble are of unusual splendor. The wealth of mosaic is marvellous. All is mosaic, with not an inch of other on walls or floor remaining. The intricate patterns on the marble floors are only surpassed by the rich work and gold-background of the walls themselves.



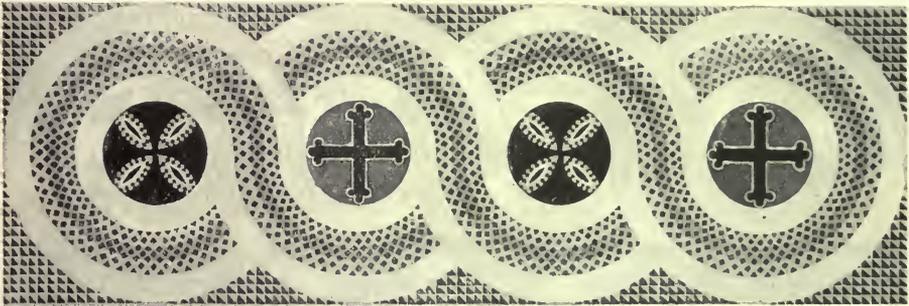
THE CATHEDRAL, PALERMO, SICILY.

the smouldering flame was ready to burst forth in horrid and redoubled but patriotic fury at the most unexpected cause.

A Frenchman, so we are told, dared to insult a Sicilian lady of high degree, upon this very road; and the Sicilians one and all, as the bells were ringing out their chimes, and lighted candles were burning upon the sacred altars, arose then and there with great revenge. Two hundred Frenchmen were killed upon the roads toward Monreale; and through the night the streets and houses of Palermo were searched for the hated nationality. The insurrection continued, and soon two thousand foreigners lay dead within Palermo. The insurrection spread throughout

And their son, Frederick, was later acknowledged King of all Sicily.

Teeming with the memories of these incidents was the road to Monreale. Here, high on the mountain, the Cathedral stands, surrounded by a town of good size. We lost but little time in entering, and stood within a church one hundred and thirty-one feet wide, and three hundred and thirty-three feet long, and one of the most magnificent interiors in the world. The pointed vaulting (quite eastern in character) was supported by eighteen gigantic columns of oriental granite, and of exquisite workmanship. Over seventy thousand square feet of mosaic occupied every available space of the walls. The mosaics, of the Greek



MARBLE MOSAIC—CAPPELLA PALATINA.

the island; and but one Frenchman in all the number was allowed to live. Nothing saved them; priests at the very altar, monks within their cloister cells, all alike fell dead. To be a Frenchman was the death sentence. The domination of the French, and the cruel subjections of the Sicilians, could no longer keep the patriots under control. At last the Sicilians arose for their freedom, and in the very face of the Pope, and from the ringing of the Vesper bells until their successful defence of Messina, the people fought for liberty and right, and brought into the island Peter of Aragon and his good wife, Constance, the daughter of Manfred, the late king, killed in the defence of his country, and cousin to the executed and lamented Conrad.

school, were of the richest and rarest description. The ornamental devises and the roof were Saracenic; but throughout the whole the Norman was often intermingled. However, since a fire in 1811, much of the work is a restoration. This famous cathedral was erected by William II., in the twelfth century, after the founding of a Benedictine monastery—the cloisters of which in the pointed style are rich in columns, inlaid with mosaics, and the whole one of the most superb convents existing.

The cloister capitals are full of grotesque heads and figures. The pointed arches and walls are of pattern in light and dark stones, and the columns, where not inlaid with mosaics, are most beautifully carved. In one



THE CLOISTER OF THE MONREALE.



IN THE CLOISTER OF THE MONREALE.

corner of the cloisters is a fountain, placed amidst a grouping of columns adorned in the Saracenic style, which no doubt lent a pleasant accompaniment to the meditations of the Benedictine monks, as they walked among the orange trees or within the shadows of the arches.

Returning from the Monreale, it was but a short detour to stop at the "Convento di Cappuccini," in the underground corridors of which are preserved the mummified bodies of many wealthy Palermitans. The bodies, with the exception of a few fastened upright against the walls, were arranged in boxes with glass covers one

above the other. In the dim light the corridors were most grotesque—and one old monk, in dusty, holy robes, stood upright with his mouth agape. It takes but a gentle touch to set his shrivelled tongue a-wagging within his open mouth. A long-bearded Capuccin Brother took grim pleasure in showing us this gastly curiosity; and in the dead man's mouth he thrust his own fingers, and set the tongue a-going; silently it wagged, as we looked at his shrivelled skin and sunken eyes.

But we cannot remain always in Palermo, and must speed on, leaving behind us all that we have learned to love so much.



TEMPLE OF JUNO LUCINA, GIRGENTI, SICILY.

We left shortly after déjeuner for Girgenti. We were comfortably seated in a compartment of the cars with a fat German, a little English woman, her tiny dog and her big son, and innumerable traps — their belongings.

When the sun had set, we arrived at Girgenti, the ancient Agrigentum of the Romans, and the Acragas of the Greeks. The sea has receded somewhat from the ancient shore, but the lands around are still, perhaps, as fair and the sea as blue as in the old Greek days when the immortal Pindar wrote of the ancient city where dwelt two hundred thousand colonists:

“Lover of glory, fairest queen
Of cities raised by human skill,
That dwell’st beside the margent green
Of flock-frequented Acragas,
High on the temple-crested hill,
The fair Proserpine’s chosen place.”

The present town is on the old acropolis, but, by far, the objects of greatest interest are the ruined Greek temples. The finest of these are the “temple of Juno Lacinia” and the “temple of Concord.” The former, situated on a precipice nearly four hundred feet

above the sea, has stood since the fifth century, B. C. The temple is peripteros hexastylus, with formerly thirty-four columns of the best period of the Greek Doric order. But earthquakes and the sirocco have left but a remnant of its former grandeur. However, there is still a remnant left—and the Doric columns standing on the precipice near the sea, amidst the grass and wild flowers, are beautiful in the art of over two thousand years ago. Nearby is the temple of Concord, also a peripteros hexastylus temple, and also in the Doric order. This is one of the best preserved Doric temples in existence, and its thirty-four columns are still standing. It was once used as a Christian church. There are also the lesser ruins of the temple of Hercules, the tomb of Thearon and the so-called temple of Castor and Pollux (four columns and the entablature of which have been re-erected); and the latter showing distinct traces of stucco and coloring.

But the former civilization is gone; and the beautiful remains tell us of the refinement and high state of cultivation of a nation and its colonies that made and perfected an architect-



THE TEMPLE OF CONCORD, GIRGENTI, SICILY.

ural order that has never been excelled in simplicity and beauty.

Leaving Girgenti for Syracuse we pass through an interesting country. The hue of the ground, owing to the



TEMPLE OF CASTOR AND POLLUX, GIRGENTI, SICILY.

many sulphur mines, is very peculiar. For miles one sees sulphurous greens; but the colors are pleasing, and the scene a novel one. At evening we arrived at Syracuse, once the most important town of Sicily and the most important of all the Hellenic cities—but now only a remnant of its former greatness. With a stirring history of over twenty-six hundred years, it has been the prize of contesting nations. At first a Phoenician settlement, it was founded in the eighth century, B. C., by the Dorians and Corinthians. The Greeks and the Romans have fought for it, and in later years the Arabs and the Normans, and all in turn have conquered and been conquered. It was in the reign of the King Hiero II. that Syracuse rose to the highest pitch of glory it ever attained. In his reign lived Archimedes, the mathematician, the first to establish the important truth in physics that a body plunged

into water loses as much of its weight as is equal to the weight of an equal volume of fluid.

Theocritus was born at Syracuse, and lived at the brilliant court of Hiero II.

“The sweet Theocritus, with softest strains,
Makes piping Pan delight Sicilian swains,
Through his smooth reed no rustic numbers
move,

But all is tenderness and all is love,
As if the muses dwelt in every vale,
Inspired the song and told the melting tale.”

The modern town (which occupies but a small part of the ancient town) is most beautifully situated upon an island connected with the mainland of Sicily. The seas at times dash wildly up against the stone walls and parapets. The modern town itself has nothing in it of especial importance. However, it is very picturesque and quaint; and the bits of mediæval doorways and windows now remaining are very interesting, the immense voisoirs of some being a noticeable and pleasing feature. The shady, narrow streets are in great contrast to the sunny seas around. The country around Syracuse is of pastoral beauty, and the road to Fort Eurelus, which latter stands at the extremity of the ancient city, is splendid with waving golden grain and verdant fields, with red pop-



A DOORWAY, SYRACUSE.

pies and great yellow daisies bordering the roadside, and giving notes of bright color among the greens and goldens of the grasses.

Fort Eurelus is where the north and south walls, erected by Dionysius, converge. It terminates in four great towers—flanked by two deep fosses, hewn in the rock. From one of these fosses a number of subterranean outlets are connected with each other, and form passages accessible not only to infantry but to cavalry as well. The "Greek Theatre," on a hillside without the present town, was the third largest of its kind erected. It was hewn in the rock in the fifth century, B. C., and is semicircular, and four hundred and ninety feet in diameter. There were, perhaps, sixty-one tiers of seats. Near this theatre, on the upper part of the hill, is the "streets of tombs," cut also out of the solid rock. But no longer sleeps anyone within. The tombs have long ago been despoiled of all their decorations. No trace is left of the cultivated audience that once sat within the theatre—except King Hiero and Queen Philistis, whose names are still traced upon the stone.

How easily our imagination can picture here the multitude listening to the plays of Greece, near the beautiful Ionian sea!

One of the most interesting sights of Syracuse are the *Latomie* or ancient quarries, from which was taken the material for the ancient city. The two principal ones are the "*Latomia del Paradiso*," and the "*Latomia dei Cappuccini*." The former has been hewn in the rock to the depth of one hundred and twenty feet, and now, with the luxuriant vegetation that has sprung up, looks like a work of nature. One imagines himself in a wild ravine, with the rocks rising in picturesque and grotesque masses around him. Here in the *Latomia del Paradiso* is the so-called "ear of Dionysius," a grotto hewn in the rock in the form of the letter S. It is two hundred and ten feet long and seventy-four feet high. It contracts toward the summit and forms peculiar acoustic properties. From an opening in the top one can hear a whisper at any point in the interior. This ear is supposed by some to be one of the prisons erected by Dionysius in order that he might de-

fect any conversation among the prisoners.

Near the *Latomia dei Cappuccini* is the church of San Giovanni and the Catacombs of the same. Both date from about the fourth century, A. D. The catacombs are very extensive and among the most interesting in existence. There is comparatively little decoration left within them; but the large circular chambers are a peculiar and an unique feature. The church of San Giovanni contains a most interesting crypt which dates from the fourth century. Here are remnants of capitals and pillars of an ancient Greek temple. A most beautifully carved Greek Ionic cap is used reversed for the bishop's chair—the volutes forming the arms. It was in this crypt that St. Paul is said to have preached on his way to Rome; and the faithful may believe they see the very spot on which he stood.

In Syracuse the great temple of Jupiter Olympium (Cicero informs us) was erected, but not a vestige remains unless we except the broken shafts of two columns.

As we leave the walls of Syracuse, and follow the border of the Ionian sea, the snowy peak of Aetna grows larger and greater until we reach Catania. There are few cities with a more stirring history than Catania. It was founded by Chalcidians in 729, B. C. By wars and earthquakes it has suffered greatly, and there was little of antiquity left after the great earthquake of 1693, since which time the present town has been rebuilt. The inhabitants have in turn been transplanted to other parts, as in the time of Hiero I., and have been reduced to a state of slavery, as in the time of Dionysius. The Goths, Saracens, and Normans have fought for the city. The first Sicilian University was founded here, and Catania was long the literary centre of the island. With all its varied history, Catania is to-day, although not rich in historic monuments and works of art, a well-built city, second only in population to Palermo.

There is a Greco-Roman theatre in

Catania that is very impressive. Only an imperfect idea can be obtained of it, for it is mostly underground. One can trace the tiers of seats and see, at places, the pure white marble of the graceful seats remaining, while the houses of the modern town rise in picturesque confusion over the very top of the ancient structure. The Benedictine monastery of San Nicolo at Catania is extensive and covers twenty-one acres of ground.

Aetna, the landmark everywhere, is most impressive from Catania and its environs. From the streets themselves Aetna towers over all in majesty and glory. The clear atmosphere, the brilliant sky, and the snowy peak of Aetna will always make Catania delightful.

Comparatively speaking, the Sicilian is poor, and therefore deserves all the more credit for his hospitality and generosity so often shown. Of course there are Sicilians and there are Sicilians; as also there are Americans and Americans. But a Sicilian's kindness is amazing, especially when one considers (what seems to us and which often is) the small amount within his pursestrings. To a stranger he is courteous and kind to an extreme. He will allow a stranger, if he be a guest or a friend to pay for nothing while in his company. "Oh!" he will say, "We are in Sicily, and I'm a Sicilian!" Those are his oft repeated words. His friends, from other cities or countries, he considers always his guests. Although he might have to stint himself for days thereafter, he will give his friends the best his larder can possess. But it may be mentioned here that an American who always longs for the luxury that surrounds him at home to accompany him abroad and who cannot take pleasure and interest in anything unless done as he or his countrymen would do it, had better remain forever away from Sicily; for he cannot be congenial to the Sicilian and the Sicilian will not be congenial to him. In no country is the saying so true that "When in Rome, do as the Romans do." One must not go to Sicily, as some one has said of another

country, to pick motes out of bright eyes, or, as I shall say of this, to find fault with those who are our peers in courtesy and gentle manners. Luxury, after all, is a relative term. A mechanic's luxury would be to see and learn in some of our great machine shops; an artist's luxury, to walk among the very kind of towns and scenes that Sicily possesses.

The first time I was invited to a Sicilian home to dine, the remarkable advice "not to eat any breakfast," was given to me. As dinner was at four in the afternoon, I replied that I should become very hungry. Again, I was told that if I ate much in the morning I would be unable to eat any dinner. A roll and a cup of coffee is rather a light breakfast for an American; so long before dinner, the pangs of hunger had overtaken me; but long before dinner was over the pangs of hunger were thoroughly satisfied. During the course of the dinner, I began to understand why my friend had advised me to eat nothing beforehand. I soon learned from a Sicilian lady next to me that a guest was expected ("out of compliment to the host and hostess") to eat more than anyone else at the table. The lady on one side and my friend on the other kept telling me, as each course was served: "Oh! but you ought to take more, even if no one else does, or you will offend the hostess." In the early part of the dinner this was all delightfully pleasant, but toward the latter courses, having followed the advice of my friend, I found I was at my wits' end to know what to do, as wine and dainties in succession followed.

We, therefore, left Catania with happy memories of a kind and pleasant people, ever thinking of the flowers and hospitality, we, perhaps, might never see again.

Our destination was Taormina.

The railroad skirts the sea, and the scene was ever changing and always beautiful. With Aetna always in sight, we rode past ancient lava streams and orange groves, and picturesque Sicilian towns and finally arrived at Taormina, at one time one of the most cel-



THE THEATRE—TAORMINA.



THE CITY GATE FROM ROAD TO GIARDINI AT TAORMINA.

ebred cities of all Sicily. It was the last of the Sicilian cities to yield to Saracen invasion; and only after a siege of eight months it surrendered to the enemy. And in the time of the Norman invasion, a siege of six months was held around its ancient fortifications. The town itself is three hundred and eighty feet above the station of Giardini. A road winds picturesquely up the hill to the quaint old town. With our luggage we seated ourselves in the trap awaiting us. Up, up we rode the tortuous road. Great prickly pear grew along the roadside; orange trees perfumed the air; and dirty children ran out from behind stone walls and hedges, begging for soldi. Donkeys, with laden panniers, were trudging up and down, and boys and men, the very perfection of Apollos, were accompanying them. Up, up our horses pulled, and at every turn the scene grew more beautiful, and Giardini, with its straggling houses, grew smaller, and the expanse

of sea grew larger. Up, up, and at last we reached the city gate, a mediaeval structure, picturesque with greens and prickly pear. Almost on level ground we entered the town itself. I was going to say we entered the middle ages.

Centuries had not seen a change within the city gates.

Women and children, physiques erect, still carried, as in the days of old, great water jugs of graceful outline, upon their heads, and went to picturesque old fountains for crystal water, fresh from Aetna's snows. Our carriage, with things of beauty on every side, rattled through the mediaeval street. To our left the town climbed up the hill, to our right below us was the sea. Fine old doorways, with decorations that were works of art, in every detail, some of Renaissance and others Gothic, we passed on every turn. We began to feel that the hands of time had been turned back to mediaeval days, for there was noth-



TAORMINA.

ing here to mar our delusions. At last we arrived at what seemed to be the end of the street, and where were the gates of Hotel Timeo. Our smiling, bright-eyed, dark-mustachioed host greeted us cordially as we alighted. The hotel commanded a view unique, and there is none more beautiful in all the world, and stood next the ancient theatre.

The theatre was of Greek origin, but owes its present form to the Romans. It is also one of the best preserved ancient theatres in existence, and commands a view unequalled. The theatre was so perfect in its acoustic

properties that words uttered in a low voice in the proscenium were distinctly heard at the top of the tiers of seats.

The morning light and evening shades are ever varying. One evening I remember a glorious sunset colored all the scene. The storm had passed, and the horizon clouds had deepened to a purplish grey, until they touched the purpler sea below. The clouds above, lit with a rosy hue, reflected pinks upon the blues of waters near the shore. With orange trees and cypresses, the rocks held up Taormina high above the sea; and the hill of Mola, with its town perched on its

very peak in precipitous height, and in its emerald green, rose higher still above Taormina. The castle wall was tinged with pink, and Mòla's houses were a thousand tints against the reddened sky. Beyond the Corinthian columns of the theatre lay the valley of the Alcantara and the mountains of Castiglione, in gay attire, and great Aetna from the sea of blue and pink had snow fields faintly red. With a blaze of glory, the setting sun sank beyond the mountains, and great shadows hid a scene of unsurpassed beauty. The town grew quiet in the evening shadows—save for music of guitar and sweet Sicilian voices. The air was freshened by the ozone from the sea; and Aetna, silvery white, was high among the stars and fleeting clouds.

We left Taormina and the most beautiful surroundings of all Sicily, and following the Ionian sea we reached Messina.

Here ended the wars of the Sicilian Vespers in the memorable siege when Messina was attacked by Charles of Anjou. The whole island from one end to the other had been stirred to the highest pitch of patriotism, after the successful rout of the French—and all alike were willing to risk everything for their country's sake. None were more brave than the citizens of Messina. In those memorable days the wives and maidens took part in the defence of the city. Women of high degree, with their lowlier sisters, carried stones and combustibles to hurl at the enemy. In fact it was a young woman who first gave the alarm of attack, and she hurled a huge fragment down and killed several French soldiers; and another, her companion, set the bells ringing, and Messina was saved, and the way opened for the entrance of their chosen Constance of Arragon.

Owing to the many vicissitudes this city has sustained, both from the hand of man and nature, the town retains but few relics of antiquity. The most interesting object in Messina is its cathedral. The latter was begun in 1098, but it has been so changed and modernized that but comparatively

little remains of the style of the original. The best part of the structure is the lower part of the façade. This is Gothic, and is very beautiful in the treatment of the style, suggesting the style as treated at places on the mainland of Italy. Its principal characteristics are its fine detail, proportion, the horizontal flat bands of inlaid marble, and the scheme of coloring so effectively produced by the latter. The general result is most chaste and artistic, but the pediment over the principal entrance is a later addition. The two Renaissance tablets between the doors, although not bad in themselves, are incongruously out of place. The bands upon the façade become larger, and the design less intricate, as they approach the top; but nowhere, owing to the variety of design and delicate coloring, do they become monotonous. Black and white marbles are freely used in combination with colors, and the treatment is everywhere delicate. The widest horizontal band, as it were, divides the front vertically into two parts, the upper part being one-half the size of the lower part. In the same proportion are the doors; the centre one being about one-half as high again as each of the other two. The coloring on this façade produced by the designs in marble is one of the most beautiful effects in Sicily. We would wish that the whole façade had been carried out in the design of the lower part. What has already been done in this Gothic work is so exceedingly beautiful that the work above it appears very mean and clumsy in its heavy classic forms and details.

The harbor, one of the finest in the world, is always busy with traffic. Boats in all direction are plying across its waters. Bright-eyed Sicilians are working hard with the incoming and outgoing cargoes. Great lumbering carts rumble along the wharves, and boatmen, in gaudy red caps, and fishermen lounge about upon the piers. Horses in harness of bright colors, brass and feathers, pull wagons painted in all gay colors and with scenes from the lives of the saints depicted

thereon, and the woodwork of astonishing design. Women in gay dress vend fruit and flowers.

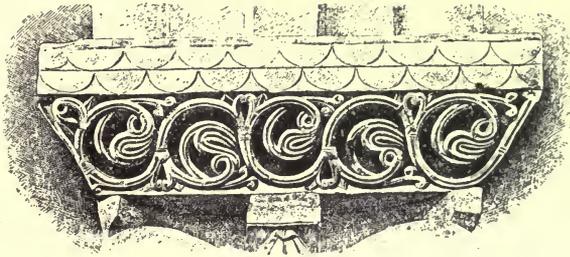
The café doors are open, and with the odor of the cigarettes is mingled that of the ever delicious chocolate and coffee. The macaroni hangs out in the sun, and whole shop-fronts, with the same on long poles, are covered; and the ceilings within are obscured by its presence. Small children and hungry beggars look longingly up as it dries in the air, while swarms of flies blacken its surface and eat up their fill in peace and content.

A lady I became acquainted with in Sicily most aptly described the island:

"In the beginning," she said, "God created everything, but when his hand became more cunning, he paid more attention to detail, until at last he made and finished Sicily—His most beautiful masterpiece."

And so we leave the land of Grecian temples, and the flowers and orange blossoms, and the blue hills and mountain peaks under the sunny skies and sail away into the seas. Sicily, like an ever-beautiful dream, fast melts into the blue waters, and Aetna's peak is faintly white above the vanished isle. At last the distance veils it all, and nothing is left to us but the azure of the skies and seas.

Albert M. Whitman.



CORNER HOUSES IN PARIS.

IN our modern cities, where the municipal authorities, scrupulously respectful of the equality of the inhabitants, too often forget that the equality of all means the liberty of each; where the regulations relating to public ways, inflexible though antiquated, form barriers to private initiative and cause our streets and avenues to be bordered from end to end by long, unvaried ribbons of stone, any innovations on the part of architects, any attempts to modify the appearance of our buildings and make them more attractive to their occupants and to passers-by, are kept within the very narrowest limits.* What, indeed, is to be done when the height to which houses may be built and the distance to which their exterior projections can extend, are fixed by the terms of a regulation, and when the municipality, without whose license one stone cannot be placed upon another, decapitates every daring summit and lops off every exuberant ledge? Confined in this manner, above, in front, and on each side, how is it possible for the outline of a house to offer any novelty; how can it differ from its neighbors, unless it be by the style of its decoration, by ornamentation more or less bombastic, which frequently appears misplaced because one feels that it is only veneering—that it might be very different from what it is, and that it is in no wise needed for the setting-off of the architectural features of the edifice?

But, though the monotonous uniformity of so many of our large public arteries is partly imputable to the requirements, theoretically justifiable no doubt, of a too paternal Highway Board, it is not always due to this cause alone. In the case of apartment houses, which are the only ones

now under consideration, it is certain that owing to the duty incumbent upon the architect of providing the greatest possible amount of house-room and the natural obligation of placing the larger number of windows in the part of the house looking out upon the street, with the consequent distribution of spaces and solid parts, he has very little latitude left to him for innovations. Even if he had any inclinations in this direction, the landlord would not be likely to give him any encouragement. As a rule, a landlord wishing to erect an apartment house fights shy of architects who want to produce something architectural: he merely requires that the house should be built, for, in matters of art, the public are now so well educated that they know architecture and housebuilding are two different things, and for the former it is the landlord who pays, while it is the architect who reaps all the glory.

One of the rare occasions in house-construction on which an architect is able to introduce a little architecture—reducing the term to the sense attributed to it by the close-fisted landlord—is when the ground upon which the house is to be erected is located at the intersection of two streets and can consequently present two faces instead of only one. The edifice then becomes a complete thing, being no longer a mere slice of a block of buildings, so that the architect's talent, if he has any, finds scope to display itself. This is why it has occurred to us that it would be interesting to see, by the inspection of a few recent examples, what French architects have been able to do of an original character in later years, and to devote these few pages to a study of corner houses, confining ourselves, of course, to apartment houses, those for which a uniform programme is laid down, which may always be summarized thus: provide the greatest extent of ac-

*The author here, of course, is referring to Paris and to other cities of the European continent.—Editor.

commodation obtainable, in order to produce the highest possible amount in rentals.

We should like to go back to former centuries and see how our ancestors managed in this respect; but, in the first place, apartment houses are things of quite modern invention, like the enormous increase in land values, which necessitates paying for the ground alone a price that would formerly have sufficed for the erection of a palace, and entails, in consequence, increased height in order to make up for the space impossible to be had laterally; secondly, in those much maligned days of yore, the civic powers were far more lenient than they are at present, and left every man free to lodge himself as he saw fit. Houses of several floors did exist, it is true, but they were in each case occupied by a single family, and a few boards did not then, as now, form the only separation between beings utterly indifferent to one another, or perhaps enemies, passing their lives side by side without ever meeting face to face. When a house was located on a corner, this position used to be utilized by the construction of a winding staircase, which, from the first floor upwards, overhung the sidewalk. By way of retrospect we give an illustration (Fig. 1) of a charming specimen of this style, dating from the fifteenth century and still standing in the old Marais quarter, at the junction of the rue Vieille du Temple and the rue des Francs-Bourgeois. This system was a very rational one, considering that the starting point of the staircase, for the use of a single family, was situated inside the dwelling. The projection thus commencing only above the basement, the whole of the corbelling was gained from the street, whereas if the stairs had been required for several distinct families, it would have been necessary to make the turret start from the ground in order to establish an exterior entrance to it.

This corner arrangement, consisting of a small overhanging staircase winding round a central newel, was perfectly logical: it is, perhaps, less so

when the staircase runs round a well starting from the ground. We have an example of the latter in a contemporary edifice, le Cercle de la Librairie (Publisher's Club), erected by M. Charles Garnier, on the corner of the Boulevard Saint-Germain and the rue Grégoire de Tours. It may be that in adopting this arrangement the eminent architect of the Paris Opera House allowed himself to be guided by his partiality (justified by success we admit) for staircases of magnificent proportions; but, however great the talent displayed, the dimensions of this staircase appear excessive in comparison with the size of the edifice itself. Employing the well-known description of a canon, namely, a hole with some metal around it, we might say of the Cercle de la Librairie that it is a staircase with something at the top. But what is perfectly admissible in the case of a great public edifice, not intended for habitation, and which calls for a certain ostensation of style, is less justifiable in domestic architecture—in the great majority of private buildings which form the subject of this article.

Our public thoroughfares, which all run in a more or less straight line, traverse one another in such a way as to form three kinds of angles, viz.: obtuse, right, or acute. It goes without saying that the shape of the plot resulting from these three different angles determines the manner of planning the house to be erected thereon. An obtuse angle, when only a slight one, is manifested by a simple deviation of the frontage, which appears broken. The bend is necessarily a solid part, merely uniting two portions of façade and gives little opportunity for any specially interesting arrangement. We present a good example of this kind of corner in Fig. 2, being a house lately erected in the Avenue Henri Martin. It is just the average kind of house met with in our large avenues; there are many like it and the sole difference between one and another consists in the greater or less profusion of sculptural ornamentation, distributed over the front.



FIG. 1.—ANGLE TOWER, RUE VIEILLE DU TEMPLE.



FIG. 2.—APARTMENT HOUSE, AVENUE HENRI MARTIN, PARIS.

When the angle is a right one, which is most frequently the case, three courses can be adopted: retain it, cut it off, or round it. In practice, the angle is scarcely ever retained, and it may be said that the first hypothesis is never realized, as, this position at the crossing point of two streets being a particularly agreeable one, it would be unwise not to profit thereby and obtain a view by placing a window there. Cutting off the corner is, therefore, the plan most generally followed, especially for houses located on streets of moderate width, where the process of rounding, to be touched upon presently, would require more space than could conveniently be spared. According to the size of the room placed on the corner and the consequent amount of light required, the architect slices off a larger or

smaller portion of the angle, so as to admit of putting one, two or even a larger number of windows. When the corner is cut off in this way to a considerable depth, the front obtained is really the principal part of the façade, the returns being merely accessory parts. All the private mansions surrounding the Arc de Triomphe, on the Place de l'Etoile, have their fronts formed in this manner, with the triangular piece of ground before the house—which we may call the product of this slicing-off process—made into a tiny garden, separating the house from too direct contact with the public road. This is a very pleasant arrangement, but involves too great a sacrifice of ground to be frequently adopted.

A house in the rue François Premier in the Champs-Élysées district



FIG. 3.—APARTMENT HOUSE, RUE FRANCOIS PREMIER, PARIS.

(Fig. 3), shows us a modification of the method just described. As will be seen, the architect seems to have taken pleasure, and we cannot blame him, in varying as much as possible the shape of the rooms of the house by putting two faces on the corner, one having two windows and the other, not so large, with one window.

In order to see the latest achievements of architectural art in the domain of house-building one must always examine the districts that extend towards the west of Paris, between the Seine, the Champs-Élysées

and the Bois de Boulogne. In this neighborhood, where grass was still growing a hundred years ago, apartment houses are springing up daily, filled with the newest appliances contributing to comfort. The rentals of these houses remain relatively within reach, for, notwithstanding the complaints of bad times emitted by architects and builders; it is not that the number of new erections has diminished, but that constructors have multiplied so that they now do a less profitable business.



FIG. 4.—APARTMENT HOUSE, RUE DE VILLEJUST AND AVENUE VICTOR HUGO, PARIS.

Three houses in the Avenue Victor Hugo, quite recently completed, give us three types of one and the same arrangement. We will not pause to speak at length of the internal disposition, which varies but little in apartment houses: There is always a large and a small drawing-room, a dining-room, from two to five bedrooms, sometimes with, but more often without, dressing-rooms, a bathroom, an ante-chamber, a servants' room and a kitchen. That is all very well, and it is quite possible to live comfortably in one of these flats, especially if the master's occupations keep him out of doors all day, for we must note here, in passing, that in a flat it is always the master who is sacrificed. Madame has one or two salons in which to pass her time, but there is no study or working room for Monsieur; if he desires one he must make shift with one of the chambers intended for bedrooms, as

the architect has foreseen nothing for him. He may some day become less of a cipher in the household, and may be provided with a cabinet opening into the drawing-room, where his visitors could wait. After this little complaint *pro domo mea*, which it is not a bad thing to make from time to time, without much prospect, however, of changing deep-rooted habits, we will say that we freely approve of the rule, in the case of corner houses, of giving the drawing-room the best position. The three examples that we here offer follow this plan, as, in each, the drawing-room has a view on three different sides. Certainly nothing is better calculated to brighten a room; but this agreeable effect is not obtained without interfering with the furnishing of the room. In effect, the abundance of windows on three sides leave but little wall space, except on the side facing the middle window,



FIG. 5.

and even this is usually occupied, in its central part, by the fireplace, which is flanked right and left by a door leading to the two sides of the house. Therefore, in a room of restricted dimensions, whose walls are pierced with three windows and two doors, to say nothing of the parts taken up by the windows and door hangings, what space is there left for the furniture? This is a serious inconvenience to people who delight to surround themselves with those personal objects that give an individual stamp to a room and distinguish it from ordinary, commonplace apartments. In order to avoid the drawbacks, while profiting by the advantages of this kind of room, the architect has in many cases, and wisely, we think, stopped up the corner window by raising its blocking course breast-high and putting a

fast, unsilvered mirror in place of the French window. This plan has a triple advantage; daylight enters the room as before, while a piece of furniture can be placed underneath the glass, and outside, especially if there is a balcony running round the apartment, flower-boxes can be so disposed as to surround the bay with a frame of verdant climbing plants. The house which stands at the angle of the Rue de Villejust and the Avenue Victor Hugo (Fig. 4), presents an example of this arrangement. As an illustration of the opposite disposition we have the house shown in Fig. 5, where the glazed space has been increased by dividing the corner window into three parts instead of two. This figure also demonstrates an arrangement that is frequently adopted. On each of the side frontages there is a



FIG. 6.

carriage entrance, thus permitting vehicles to go in on one side of the house and come out again on the other side after taking up or depositing the visitors at the foot of the staircase at the bottom of this circular passage.

In dealing with flattened corners, as we have just described them, the constructor has not much field for the exercise of his talent, the corner front being merely a continuation of the lateral façade. We may remark, however, without entirely approving the result, the great pains taken by the architect of the third house (Fig. 6) to modify the triteness of its façade. Some better method might surely have been found for joining the two sides than to leave the corner face plain after having adopted those voluminous columns reaching to a height of two floors. Besides, what function is performed by these columns, which rest on consoles and sustain a cornice that is totally useless, as it caps nothing, and is, moreover, surmounted by two floors. Yet, remove this useless cornice and the columns no longer have any *raison d'être*, or the consoles either. It is, in fact, pure ornamentation, and as such, we find it rather encumbering.

Though the architecture of these houses is somewhat commonplace, it has the merit of being for the most part simple and unpretentious, a quality not invariably met with in the edifices forming the third of the three categories spoken of above, that is to say, those whose corner is rounded off and presents a circular shape. This course is not usually followed unless the house is located on a square sufficiently large, or on an avenue sufficiently wide, to allow of the recoil; it is, in reality, not a simple rounding off or softening of the angle, but a veritable tower is placed at the intersection of the two streets. This is not an innovation, as, apart from the circular pavilions, which in past times flanked the angles of châteaux in memory of the ancient towers of defense, urban edifices were also built in this form, as is evidenced by the Pavilion de Hanovre,

built in Paris about the year 1750 on what is now called the Boulevard des Italiens. But it is especially during the last thirty years that apartment-houses have been built after this fashion; and we must believe that the tower has a great fascination for landlords, seeing that every house of any consequence possesses this appendage, which in most instances is a mere decoration and is sometimes quite inappropriate. Fashion has also had something to do with it; in our era of wealth the rich man wants to have his tower, just as in former days every powerful noble had his dungeon. The tower is precisely the dungeon of the bourgeois, who wishes to assert by some external sign the might of his shekels and the solidity of his credit. We are bound, in fact, to recognize that although this tower arrangement has certain advantages it is principally adopted for the sake of show, and that, here again, inside comfort is sacrificed to external appearance. It is the passers-by who reap the enjoyment, and it cannot be denied that the lantern or dome-shaped summits standing out here and there from the straight line of roofs do vary the monotony of our avenues. The tenants also are flattered, by the same sentiment as the landlord, at the idea of living in a house which attracts notice and gives people a good opinion of them. Consequently, they submit meekly enough to the inconveniences connected with the internal arrangement of their flats. The drawing-room could not well occupy any other position than this place of honor; but, if as we have said, it is a difficult matter to furnish a room containing numerous windows, the arrangement of the furniture in a room of circular shape is still more embarrassing; besides which, it is pretty certain that, in whatever position one sits there will be a window at one's back, and, while everybody is not incommoded by this, we think it detracts to some extent from the comfort of the room and gives one the impression of living in the street.

Paris contains a hundred houses in



FIG. 7.—APARTMENT HOUSE, RUE BOISSIERE AND RUE DE LONGCHAMPS,

the same style as the building shown in Fig. 7, which is located at the crossing point of the Rue Boissière and the Rue de Longchamps, with its principal view toward the Place d'Iena. You will see everywhere the same mode of decoration, consisting in placing imbedded columns on the balcony of the second floor, their capitals supporting the cornice on which rests the fourth floor balcony. Here again we may ask ourselves whether the columns and

cornice serve any useful purpose. It is an open question; the former justify the latter without having in themselves or in the necessities of the construction their own proper justification. However, we can understand the architect's desire to enrich the outline of this tower, which, if left bare, would have resembled a cylinder covered by an extinguisher. Still, we hope that one day something better will be found.

The constructor of the house repre-



FIG. 8.—APARTMENT HOUSE, RUE WASHINGTON AND AVENUE DES CHAMPS ELYSEES, PARIS.

sented in Fig. 8, located on the corner of the Rue Washington and the Avenue des Champs-Élysées, and to which the finishing touches are now being put, does not seem to have done any better. Instead of one column he has put two. Perhaps this was necessary in order to satisfy the eye and to have the appearance of supporting the peculiar crown with which he has capped his cylinder. A cupola was not enough for him, so he has added thereto a belvedere surmounted by a rather

unexpected end-ornament. We cannot imagine the purpose of the belvedere, or who, in an apartment-house, can enjoy the use of it. Will it be the domestics, who are the usual denizens of these upper regions? On the whole, we incline rather to the theory that this terrace is intended by an obliging attention on the part of the landlord, to enable the tenants to look over their neighbors' heads and see the fireworks which illuminate the four corners of Paris on the Fourteenth of July. An-



FIG. 9.—APARTMENT HOUSE, AVENUE HENRI MARTIN, PARIS.

other and more probable explanation of this exuberance lies perhaps in the landlord's desire to have something strictly novel and to build a house higher than the neighboring ones, for it will be noticed that the illustration shows another house which likewise has the inevitable corner tower.

One more, and a last example, located on the Avenue Henri Martin, in the Trocadero district, displays greater ingenuity and sounder taste, and furnishes us furthermore with a specimen belonging to the last of the three kinds of corners above named, that of the acute angle. Sharp enough, in truth, was the tongue of ground which the architect had to utilize, and narrow enough the space for placing a principal room on the corner, yet the position was too good to be wasted by putting a minor chamber there. The

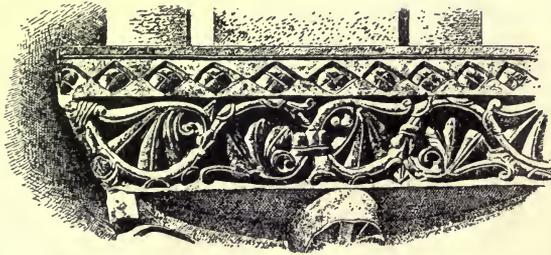
difficulty has been solved in a very ingenious and yet simple fashion. From the second floor upwards the architect has dilated the walls and supported them by corbelling. He could not commence at the first floor because the regulations forbid balconies or projections of any sort below the second floor. This interdiction, it appears, is a relic of the Middle Ages and was enacted because, with the narrow streets of those days, any corbelling at a lower height would have obstructed the passage of vehicles, especially wagons with high loads of hay. It is evident that in the present case, particularly as there is a garden in front of the house, the corbelling would not have obstructed anything or anybody; but unfortunately argument has never yet prevailed against a regulation. The increased width thus given to the three

upper stories has made it possible to place a window in the front part of the tower, thus making up in a measure for the insufficiency of the ground. It will be noticed also that the edifice has been rendered more graceful by the obligation of keeping the basement solid, which affords another proof of the adage that "necessity is the mother of invention" and is often a surer guide than complete liberty.

The few examples cited are, as we have said, for the most part of recent construction; they will, therefore, give a fair idea of what is being done in Paris in this direction. We do not assert that we are entirely pleased with them, or indeed with the majority of other contemporary erections, in

which we meet again and again the whole arsenal of musty formulas, the eternal stock of antiquated elements that have served hundreds and hundreds of times and yet without which it would seem that architects could not exist. We Frenchmen still retain our partiality for stone; we wish our buildings to last forever and we believe that outside of this material there is no salvation. Iron has not yet established its reputation and can produce no title-deeds to prove its high antiquity; it is a newcomer, an upstart, and as such is still regarded with suspicion. And yet iron seems to be the material that is destined to infuse into modern architecture the new blood of which it stands in such great need.

P. Frantz Marcou.





THE CLOISTER; CAVAILLON CATHEDRAL.

FRENCH CATHEDRALS.

Part IX.

THE CATHEDRALS OF PROVENCE. V.

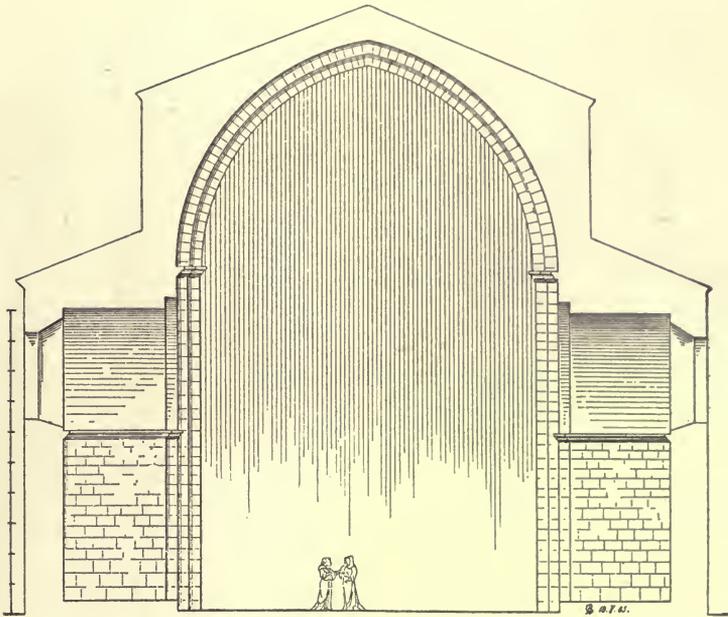
I.

THE cathedral of Orange, though of little architectural importance, offers one of the simplest plans in Provence, and is one of the best types of the hall basilica in France. It is a rectangle with a pointed tunnel vault carried on plain double arches, which divide it into four large bays. They rest on plain pilasters applied to the inner faces of large piers which are internal buttresses, forming deep recesses connected with round arches with inner broader arches behind them. These recesses are now used as chapels, but their shallow form is not suited to that purpose. There is a striking similarity between this plan and that of the cathedral of Fréjus, though the latter has cross vaults.

An entrance on the south side opens into the second bay. The chapels are lighted by small round-arched windows in the upper part of the walls, and on the south side small windows have been cut into the vaulting in the second, third and fourth bays. The choir, somewhat narrower than the nave, and entered by a series of plain recessed pointed arches, of which the lower rest on barbarous corbels, fills the lower part of the tower. It is covered by a dome with an octagonal base and the usual pendentives. Beyond is a small semicircular apse—pentagonal externally—now walled up and not forming part of the cathedral interior. Externally the cathedral is closely surrounded, in large part, by unimportant buildings. The south porch retains



THE CATHEDRAL OF CAVAILLON, FROM THE SOUTH.



TRANSVERSE SECTION, ORANGE CATHEDRAL.

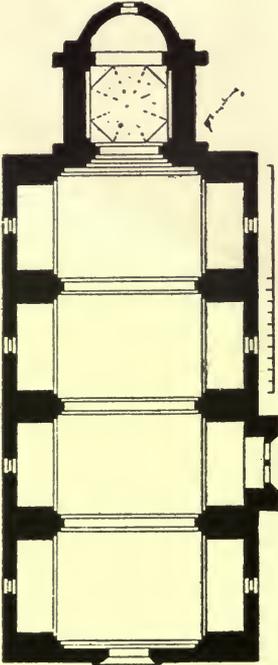
some fragments of the twelfth century in its lower parts, while its very irregular upper portions, entirely without beauty, date from the fourteenth. The tower, built in 1338, ruined by the Protestants, and subsequently restored in part, is not wanting in mass, but in its present almost dismantled state it is of little interest.

The cathedral of Orange was built in 1085 and a consecration is recorded in 1208. It suffered so severely from Protestant injuries, the tower and vaulting being destroyed, that though the latter was rebuilt in the sixteenth century in its original form, the building, as we now have it, is scarce more than a copy of the original. Yet it is a fair type of a Provençal church of the eleventh century, though its chief interest at present is in its plan and construction. Its interior is covered with tawdry and unimportant painted decorations which cover up the stonework without giving it beauty. The small size of the church, and the simplicity of its structure, with the absence of carved ornament, form a whole in which even the archaeologist

will find little to interest him. The western door dates from the present century. The south portal, though in a very bad state, is the most pretentious external feature. The doorway is of a debased Renaissance type, with three Tuscan columns carrying a pediment. The porch is enclosed within three irregularly centred pointed arches, resting on a series of small pedestals carrying a continuous cornice, which serves as their capitals.

Fortunately the visitor to Orange will find so much to interest him in its superb Roman remains, that a visit to the city will not be regretted because of the poverty of its cathedral. Yet it is a striking fact that the builders of this cathedral made no use of the abundant and suggestive materials at their very doors. The city of Avignon offers almost nothing in Roman remains, yet the detail of its cathedral is distinctively of this class, the cornice which supports the ancient parts of the tower being in fact a reproduction of the cornice of the attic of the triumphal arch at Orange. Obviously, at the time when the cathedral of Orange

was built, the predilection of Provençal builders for Roman motifs had passed away. Certainly it is difficult to find



PLAN OF ORANGE CATHEDRAL.

other grounds for its ignoring, unless, indeed, it was destroyed when it was rebuilt, for in the sixteenth century the meaning and purpose of the true art of Provence had long been forgotten.

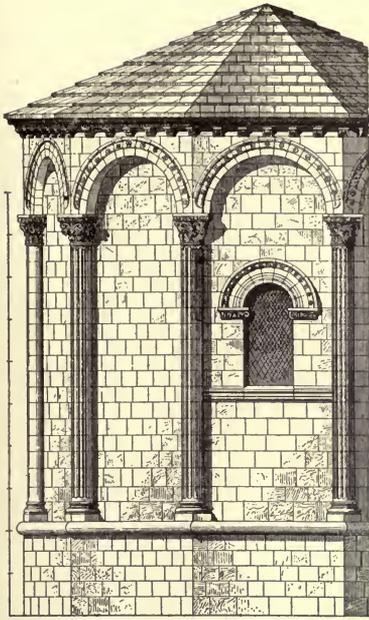
II.

Few facts have survived in the history of the cathedral of Cavailon; it was dedicated in 1023 and again in 1232, and considerable additions to it were made in the seventeenth century. But no record tells us what was done in the early period of its history, and even the fact of a destruction by fire immediately after the dedication of 1023 is not known to have actually occurred. In plan it is exactly that of its near neighbor, the cathedral of Orange, though its cloister and later additions materially modify it. It differs considerably in dimensions and arrangement, the nave being narrower,

and of five bays, each smaller than at Orange, while the internal buttresses are thicker. The choir, which has a dome, is the same width as the nave, and is inclosed by a polygonal apse. The pointed tunnel vault of the nave rests on double arches, as at Orange, but the outer piers, applied to the buttresses, have small upper columns as at Aix and Arles; the central piers have been cut away below these columns and are supported on corbels, below which are large sculptured groups. A round archway forms the entrance to the choir, whose dome is of the usual type, with pendentives—rather large—with the symbols of the Evangelists, and a rib in the centre of each face. The semidome of the apse is an ugly recent restoration, with a skylight cut in its top. The whole of the interior is painted or gilded in the worst possible taste, with the additional disadvantage of covering up much of the primitive construction. At the western end of the nave is an inner porch or tribune supported by Ionic columns, built in the seventeenth century.

The chapels between the buttresses, which entirely modify the character of the interior, are of great variety. On the north side, beginning at the west, is the chapel of Vêran (fourteenth century), whose Gothic structure is almost hidden by a sumptuous gilt decoration in the Renaissance style. Then comes a plain one, with a round tunnel vault at right angles to the nave. The third vies with the first in the elaborateness of its decoration, and perhaps surpasses it with its coffered vault. The fourth and fifth chapels on both sides of the nave are plain, with tunnel vaults. The fourth on the south side has, however, been recently decorated with an attempted "restoration."

The first three chapels on the south side have outer bays of the seventeenth century, in a severe style of architecture, with domical ceilings and plain pilasters. The first is two bays deep, the second is three, and the third forms an entrance from the cloister to the cathedral, by which the church is



CAVAILLON. RESTORATION OF APSE BY REVOIL.

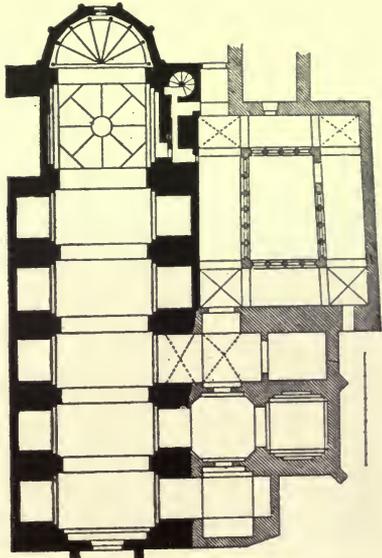
usually entered. A third bay to this passage is a small chamber with a flat ceiling used as a baptistery.

Like the cathedral of Orange the cathedral of Cavaillon is better studied in its plan than in the structure itself, but unlike that cathedral it possesses external features of the greatest interest, though now much injured by time. Its outer apse wall, its central tower, the friezes on the walls of the nave, and the cloister are each worthy some extended study. In some respects the apse is the most interesting. Externally it has five sides, though it has seven within. A channelled column, save next the cathedral where it is plain, stands on a ledge at each angle. The capitals are of acanthus leaves or acanthus and grotesques. Round arches with an upper moulding or hood, connect the columns, the central one being decorated with small rosettes. In the middle of the central bay is a small round-headed window, now closed. The wall is crowned with a small foliated cornice on consols carved with leaves or heads.

There is some classic feeling in this decoration; it recalls, in its general

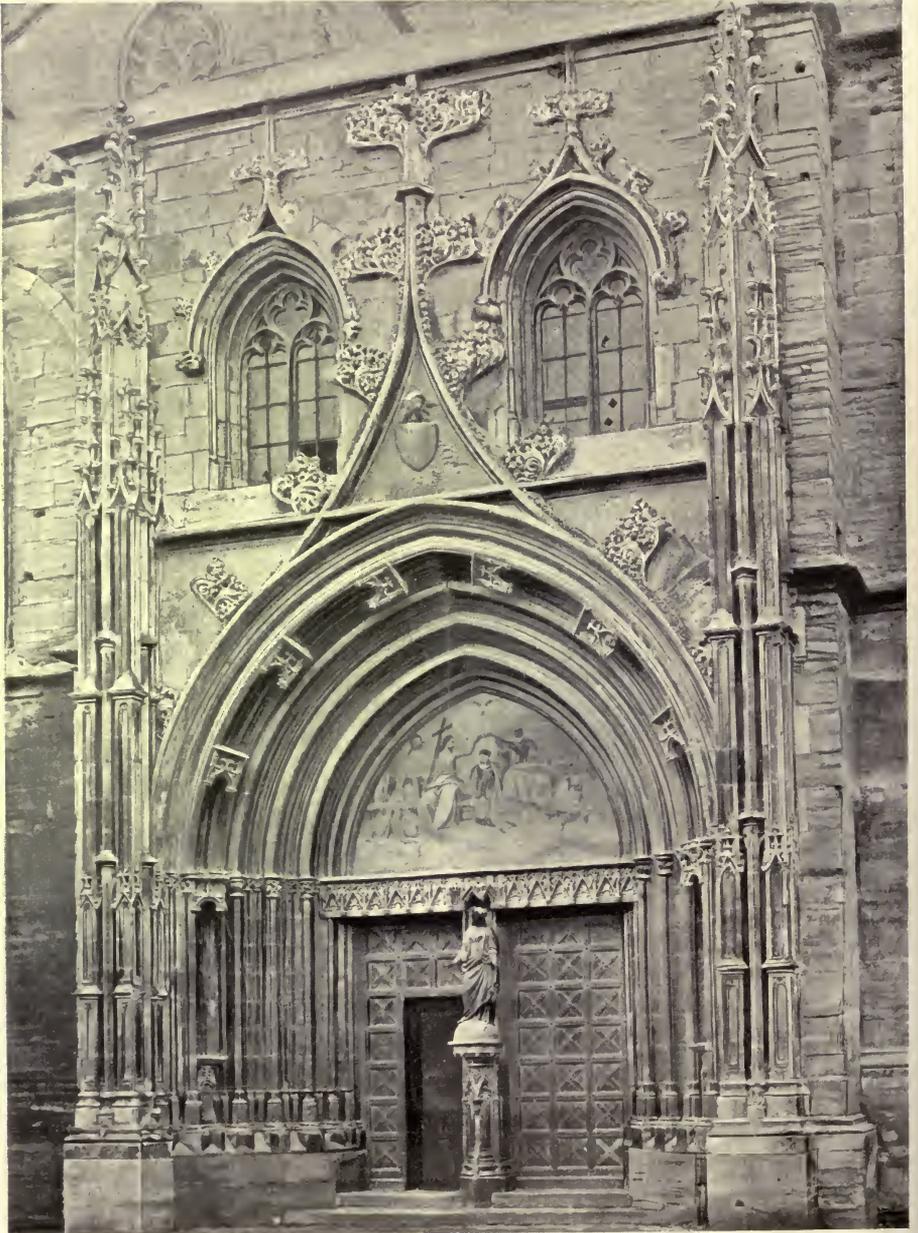
effect, the west porch of the cathedral of Avignon, the partly dismantled west entrance of the cathedral of S. Paul Trois Châteaux, and the west doorway of the south aisle of the cathedral of Aix. But the date is obviously later than any of these. The channelled shafts of the columns might be appropriately surmounted with Corinthian capitals, but though the acanthus leaf is present in the capitals they are not classic, and the introduction of grotesque shows a wide departure from the earlier usage. M. Révoil inclines to the belief that this decoration may date from a time not much before the second recorded dedication of the cathedral by Pope Innocent IV. in 1232, but the style of the carving is considerably earlier than that of the octagonal tower, which he dates at the end of the twelfth century, but which, of the two parts, is more probably the less ancient.

The lantern surmounts the dome of the choir. A low plain circular base finished with a roll moulding, stands on a large square rising above the roof. Above is the octagon, with columns



PLAN OF CAVAILLON CATHEDRAL.

on each edge, the abaci of whose capitals forms a line around it. A low recessed wall above supports a flat



SOUTH PORTAL, CARPENTRAS CATHEDRAL.

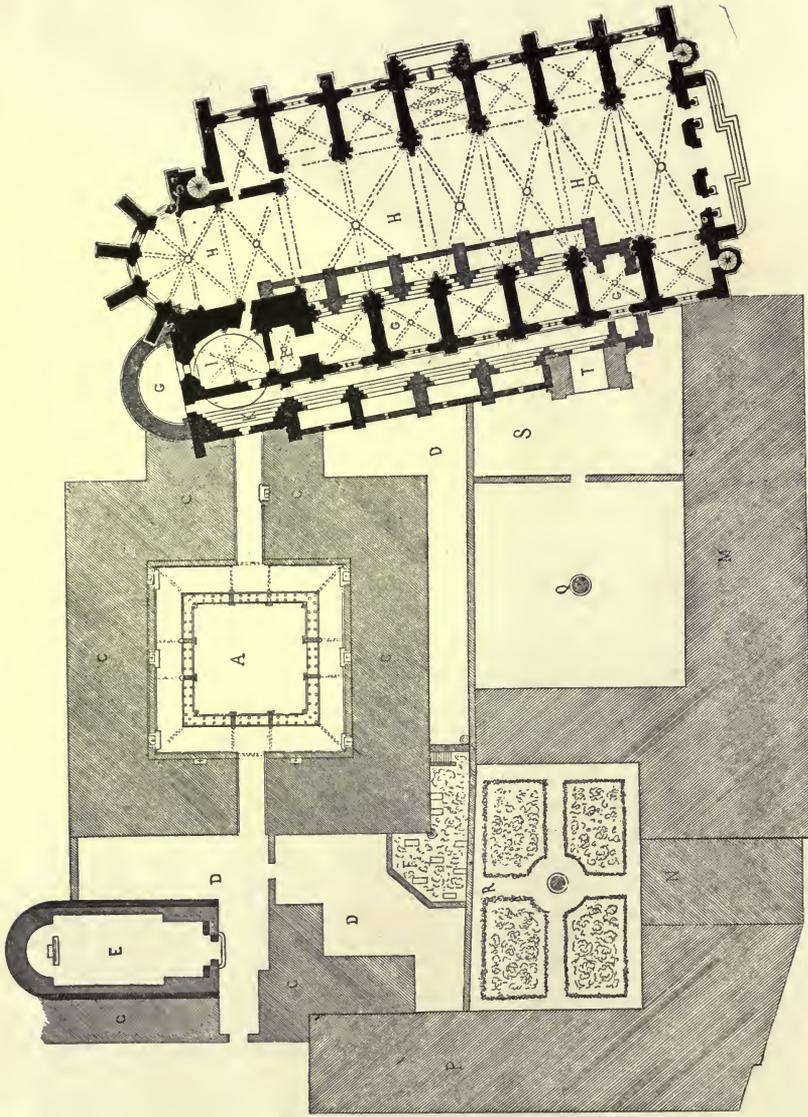


EAST END, CATHEDRAL OF CAVILLON.

pointed roof. Each face has a small round-headed window enclosed in columns carrying an arch, the abaci here being also carried around the octagon as a string, passing around the corner columns. It is an exceedingly interesting structure, though suffering somewhat from its unfavorable position and comparatively low height. The east wall of the cathedral, to which the apse is applied, ends abruptly in a horizontal line, and nothing therefore leads up to the lantern. But seen from the cloister, or from the open square beyond the cloister, it is completely visible. Here, also, may be seen the singular narrow

bell turret that immediately adjoins the apse, standing between it and the unimportant door that leads to the cloister. It is surmounted by a gabled arch for a bell; much of its inner or western part has been rebuilt.

The exterior walls of the cathedral are largely rough plastered. In the uninteresting mass of applied buildings on the south it is still possible to distinguish the upper parts of the thick nave buttresses, with two small applied arches, like the fragments of a blind arcade, on their upper surfaces. The buttresses are stopped below the roof, and a connecting wall built between them, which, with them, is cov-



PLAN OF CATHEDRAL, CLOISTER AND EPISCOPAL PALACE, CARPENTRAS.

A, Cloister (now demolished); C, dwellings; D, court; E, chapel of S. Etienne; F, cemetery of the cathedral chapter; G, old cathedral of S. Pierre; H, cathedral of S. Siffrein; I, sacristy; K, inner sacristy (both under ancient tower); L, treasury; M, episcopal palace; N, part of the palace, now demolished; P, library of the bishop; Q, court of honor; R, garden of the palace; S, court of offices; T, Roman arch.

ered with a tiled roof. At the top of the nave wall, on the south side, is a rich frieze of wreath-like foliage, now much decayed. The nave is roofed with stone with strongly marked longitudinal lines on the south side, and with tiles on the north; along its ridge is the original stone crest of interlaced half-circles.

On the north side of the cathedral more of the stone construction is visible, though there are no buttresses, and the chapels are scarcely more interesting than the featureless structures on the south. But the frieze is richer and more elaborate than on the other side of the church. It is much defaced, but the subjects show a succession of men, emblems, animals and ornamental objects whose sacred significance must at one time have been well known, but whose meaning has long since been lost. This cornice is not visible from the street, but an obliging iron-worker will take you to his room at the top of the opposite house, and charge nothing for the courtesy he extends to you!

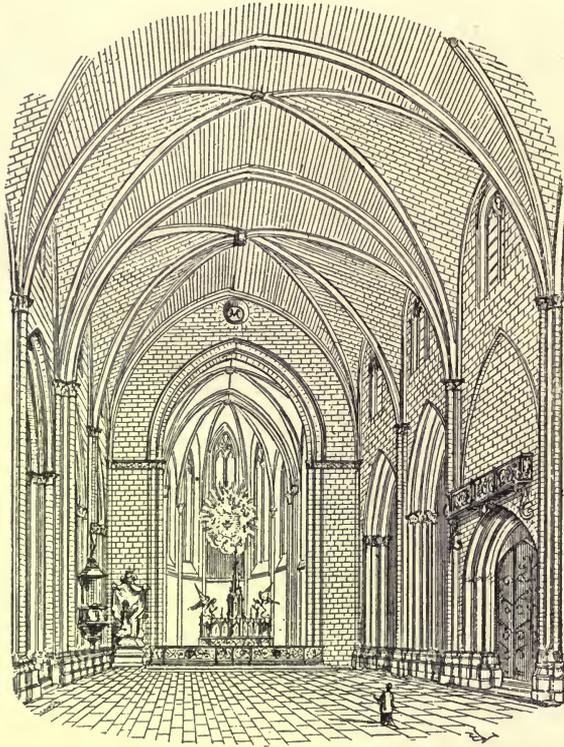
The cloister is on the south side of the cathedral, and is evidently of the eleventh or early part of the twelfth century. It has none of the light and graceful character which distinguishes the cloisters of Aix and Arles, but somewhat suggests the cloister of Vaison in the heaviness of its forms and the lowness of its proportions. It is a small rectangle enclosed within plain solid walls, of which the northern is the south wall of the cathedral, and the western the wall of the third or entrance chapel. It has four bays on the east and west, six on the north and five on the south. The two long sides, however, are approximately of the same length, an arch of extra width being inserted on the south as an entrance to the quadrangle. The arcade is formed of a double series of round arches, of which the outer rest on broad piers, to which are applied the short columns carrying the inner arches. The arches are plain, with a small hood moulding on both inner and outer faces, save in the east gal-

lery where it is omitted. The carving of the capitals is so greatly defaced as to be scarcely intelligible, but a few pictorial ones can be distinguished, as well as some of the Corinthian type. The walks have round tunnel vaults, with a single arch in the centre and at each end, where they enclose cross vaults, those on the west side having ribs and those on the east none. The vault arches and the diagonal ribs at the angles rest on rounded corbels much defaced. The west gallery is slightly narrower than the others, and its inner arches have semi-octagonal piers with string-like capitals, instead of the applied columns of the other walks. The buildings which enclose the cloister on the east and west are entirely featureless; the exterior of the south wall has three deep round arches. The cloister is not restored, save for some slight patchings in the vaults, but its generally decayed condition is not untypical of the state of this cathedral.

III.

The cathedral of S. Siffrein, at Carpentras, is a Gothic structure of the fifteenth century, but connected with it, and partly covering its sacristy, are some remains of the cathedral of S. Pierre which immediately preceded it. All that is left is the dome of the choir and a fragment of the nave, which evidently formed part of a church of the early part of the twelfth century. It has been dated as late as the thirteenth century, but neither the structure nor the detail that remain warrant so late a time.

Sufficient data has survived to permit a reconstruction of the plan. It had an introductory or vestibule bay at the west end, a nave of five bays, with a pointed tunnel vault, and bordered with chapels between the heavy buttresses, a choir with an octagonal dome, and a semicircular apse; a plan with very striking resemblance to the cathedrals of Cavaillon and Avignon. Nor are the points of resemblance in the plan alone. The fragment of the



INTERIOR OF S. SIFFREIN, CARPENTRAS.

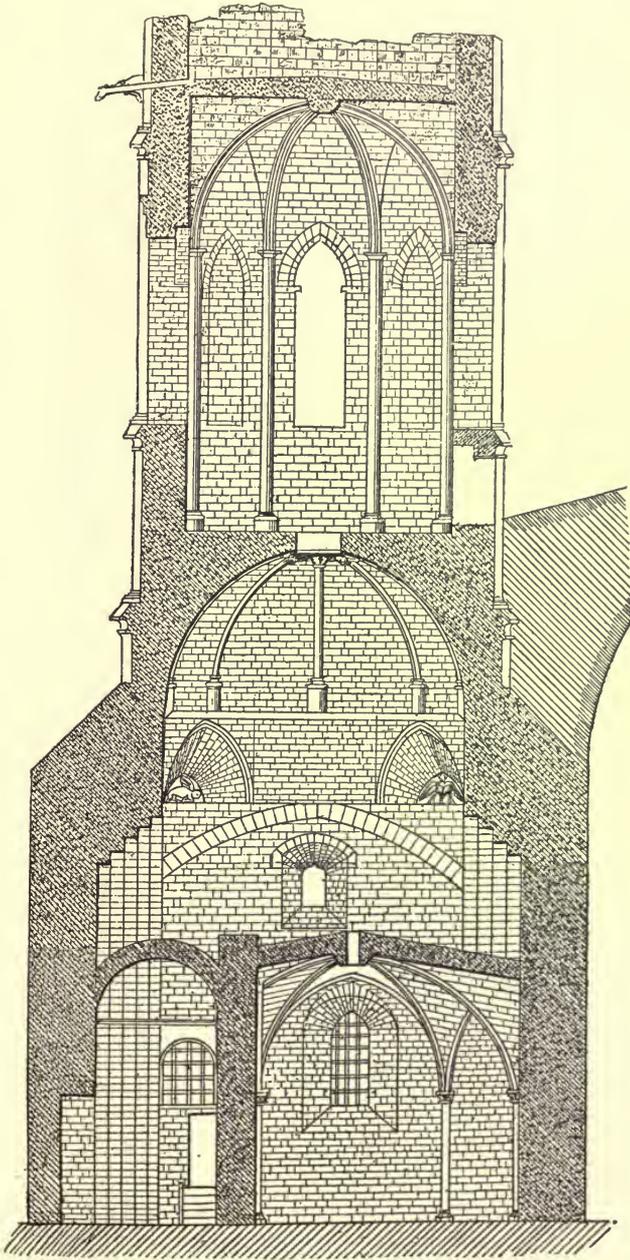
nave shows the inserted column in the upper part of the piers, and above is a broad carved frieze or cornice, as at Avignon. Only one of the decorated columns remains, and its capital is a heavy piece of sculpture not even fitted in size to its column.

The dome bay, with the tower above it, remains intact, standing free over the sacristy of the present cathedral. It is supported on the north and south sides by a series of recessed arches, very much as the domes of the cathedrals of Avignon and of La Major at Marseilles. But here the arches rest on piers rising from the ground, while in the other churches they are applied to the east and west arches of the enclosing bay. Pendentives of the usual type, with the symbols of the Evangelists, form a slightly irregular octagon, around which runs a carved string variously ornamented with human masks of barbarous character in the corners. The dome has column-like

ribs in the centre of each face, meeting at the summit in an open ring.

The belfry or tower which rises above the dome is much later in date than those of Avignon or Cavaillon, and may be as recent as the early part of the thirteenth century. Instead of the low towers which surmount the domes of those cathedrals, there is a lofty chamber, with applied columns in the angles, whose bases and capitals are Romanesque, but which carry Gothic vault-ribs and a slightly pointed vault. Above are the fragmentary remains of the windows of an upper stage, but the original finish of the tower has long since been lost.

This fragment is a most interesting monument of the transition period in which the characteristics of several epochs may be distinguished. It is certainly to be regretted that the disasters which befell the city of Carpentras in the thirteenth and fourteenth centuries, and especially its burning in



SECTION OF THE TOWER OF S. PIERRE, CARPENTRAS.

1312, should have caused the decay of this church and necessitated the building of a new one. Notwithstanding that a part of this later structure was built under what remained of the older, it is probably to their close juxtaposition that we owe the survival of the older fragment. The final collapse of the cathedral of S. Pierre appears, however, to have been a matter of some time. A writer as late as 1649 speaks of four of the chapels of the nave as still existing, and it is well known that the remains of the cloister that once formed a part of the cathedral group were removed in 1829, to make room for some prisons.

The present cathedral of Carpentras, the cathedral church of S. Siffrein, with which the fragment of the ancient church is connected, offers little of interest to the traveler, the archaeologist or the architect. It was begun by Pope Benedict XIII., while resident at Avignon, who regarded Carpentras with especial favor, retaining to himself, in 1403, the title and function of the bishop of Carpentras. The first stone of the present edifice was laid in 1404 by his representative and delegate, Artaud, archbishop of Arles, the architect, as an inscription tells us, being one *Colinus Thomacii*.

The work of building progressed slowly. These were troublous times for the region, money was collected slowly and for many years the people were quite incapable of continuing the erection of even the modest building that is still the most conspicuous structure in the city. It was dedicated more than a hundred years after it had been begun in 1519.

The architectural interest of this building is comparatively unimportant. It consists of a nave of six bays, from which open chapels, and a small choir and apse. The detail is thin and slight, characteristic, indeed, of the Gothic of Provence. The church need not, therefore, detain us further than to remark that the interior decorations, especially those of the high altar and the east end are in very bad taste, and produce a result that, in this meagre interior, is almost disheartening.

The exterior, however, has in its south door one of the most charming pieces of late Gothic art in the south of France. As everywhere in this region there is a poverty in the detail that at once stamps it as an exotic type of architecture; but the designer of this portal enjoyed a great advantage in being able to set his jewel—for such it really is—in a plain wall otherwise practically devoid of architectural character. The crockets and finial of the outer arch are, indeed, quite stately in design, but the detail of the supporting columns and even the mouldings of the recessed arch are wanting in strength. On the pier that divides the doorway into two is a charming statue of the Virgin, *Notre Dame des Nieges*, and the tympanum is filled with a fresco representing the Coronation of the Virgin, now much defaced. The portal is really a delightful bit, but the busy traveler, intent on seeing the most within the least time, may not unwisely deem it best to omit Carpentras from his itineracy, if this be the most, as it is, that its cathedral church has to offer him.

Barr Ferree.



CHAPEL AND LIBRARY, RUTGERS COLLEGE (1873).

Henry J. Hardenbergh, Architect.

HENRY JANEWAY HARDENBERGH.

HENRY JANEWAY HARDENBERGH was born at New Brunswick, N. J., Feb. 6, 1847, although his family removed, when he was two years old, and he has since resided in Jersey City and New York City. He comes of the Dutch stock which has been so potent in the development of New Jersey. His first American ancestor emigrated from Amsterdam about 1644. His great great grandfather, Jacob Rutsen Hardenbergh, was one of the founders of Queen's, now Rutgers, College and became its first President in 1785.

In 1865 Mr. Hardenbergh entered the office of Detlef Lienau, a German by birth and temperament, and both German and French by professional training. He was a pupil of Henri Labrouste and had imbibed in that atelier a partial belief in the neo-grec of which his "patron" was the apostle. Mr. Lienau's professional work

in New York was not so extensive as it deserved to be. A glass warehouse of his design in Howard street was for many years after its erection one of the most interesting and respectable of our commercial buildings, with touches of the neo-grec in detail that did it neither much good nor much harm, but with the evidence of artistic sense and training in its proportion and its fenestration, and with a straightforward and structural treatment throughout, that were very rare then and are not very common now. This work was seriously marred by the addition of a story or two, I know not whether or not by the original architect, but at any rate a necessary disturbance of a design already complete. By the same author was evidently also an office building in Cedar street, much later in date, though still before the elevator had begun to work its influence on the design of commercial buildings, and

by no means so successful in composition, though it had the same attractiveness of a rational following out of the ground-plan in the elevation, and of a straightforward and structural treatment of detail. I recall nothing else of Mr. Lienau's in New York, though on the Jersey side of the North River he erected some warehouses that were very conspicuous objects in the skyline of that low shore before it was as crowded as it has since become.

Mr. Lienau's neo-grec had no great influence on his pupil, as it has long ceased to have any influence on any designers, although the first of Mr. Hardenbergh's apartment houses, the Van Corlear on Seventh avenue, shows in some of its details the efforts of his special studies. Much more than in detail it reveals them in what I am compelled, for want of a better word, to call the spottiness of effect which seems to belong to all the neo-grec work done on this side of the water, at least. Nothing could be more remote from the quietness which the architect has cultivated and attained in his riper work than this jerky and detonating style. Mr. Lienau's own work in it was by no means so explosive as the early works in it of Mr. Hunt, who was the apostle of it in New York. But Mr. Lienau's work shows qualities that were quite independent of this special style, and that were calculated to be of great advantage to an apt pupil. Chief among them was what I have called the straightforward and structural treatment of his designs, the habit of considering the artistic problem as inextricably connected with the mechanical problem, of regarding his paper design as the drawing of a building rather than the execution of it as the building of a drawing.

When Mr. Hardenbergh was graduated from Mr. Lienau's office, "Victorian Gothic" was in full possession of the aspiring and active minded of the younger American architects. Of this, his first work, the building for the

grammar school of Rutgers College (1870) was more or less an example. Three years later, however, a more important and more significant work, the combined chapel and library of the college, is Gothic, indeed, but no more of the "Victorian" variety than it is neo-grec. It is even quite as much German as English Gothic, deriving its German character chiefly from the composition and detail of one of its most attractive features, the triple porch, with its tall pointed openings without exterior mouldings, its buttresses produced through the parapet and crowned with finials, and the gable-mouldings similarly produced and crowned. It is still a creditable piece of work, which is so straightforwardly designed that it cannot conceivably become ridiculous with any change in its surroundings and that it harmonizes with the surroundings for which it was designed in spite of the want of technical congruity of its style. As the work of a young architect, almost a beginner in 1873, it is remarkable, considering what the ambitious and modish young architects of that time were doing, for its renunciation of the kind of effect and the means of effectiveness which most of them sought. It would not be just to call its sober monochrome dull, for there is no lack of animation in the composition. But it shows that the designer was less afraid of dulness than of restlessness, and it shows that he was more impressed than his contemporaries were apt to be with "the value of peace and quietness." He has continued ever since to exhibit his appreciation of those excellent qualities.

It was ten years later, after a variety of professional employments that were mainly useful to the architect, artistically speaking, as studies, that Mr. Hardenbergh began to produce a series of works which showed unmistakably that he had "found his handwriting;" that he had attained the power of putting an individual stamp upon his handiwork. This proclamation was made most powerfully, though not quite first, in



THE "DAKOTA" APARTMENT HOUSE (1884).
Central Park West and 72d St. Henry J. Hardenbergh, Architect.



the Dakota, which is of special significance in that we may suppose that the success of it determined its author's special "line" as a builder of hotels, in which his most conspicuous work has since been done. Thirteen years ago the lofty apartment house was an architectural novelty, as the associated apartment house was a novelty in investment. The busiest designers of apartment houses were also the most successful promoters of associations. Upon the whole the architectural results of these operations were much more successful than there was any good reason to expect; much more successful, as everybody knows, than the financial results, which were so discouraging to the investors that for quite a decade nobody has ventured to go about the promotion of a new "associated dwelling." At any rate, the architectural results were so successful that it is a very considerable distinction to have designed the best apartment house in New York. The Dakota was acclaimed upon its completion of having attained that distinction, which after thirteen years it continues to hold, and which is only emphasized by the erection of newer apartment hotels in its neighborhood, with all the illumination that its design could convey to their designers. The Dakota, of course, was not an associated dwelling, but an individual investment. The architect had an unusual opportunity in a whole block-front facing Central Park, but the opportunity involved a corresponding responsibility. Central Park is the one municipal possession of which we have a clear right to be proud, and to erect what was in 1883 a towering building of eight stories fronting it, and visible from a great part of it, was for an architect, artistically speaking, to take his life in his hand. Even if he made what in any other place would have been a success, the chances were that the judicious visitor to the Park would prefer nothing in its place, or at least an inconspicuous four-story front which he could ignore. That an eight-story apartment house could become a posi-

tive addition to the attractiveness of the Park was an attainment which the architect could scarcely have ventured to promise to himself. Yet in the Dakota this complete success has been attained. The building actually helps the Park. Its picturesqueness of outline and effect is attained without any sacrifice of unity, or even of formal symmetry, for each front is laterally, as well as vertically, a triple composition, which in both cases is carefully studied in mass and carefully carried out in detail.

It is questionable whether the vertical division might not have been still more emphasized to its advantage by constructing the whole of the two-story basement in the olive sandstone which is employed in the wrought work; but the division, emphasized by a broad belt of terra cotta at the impost of the arches and a vigorously moulded string course in stone, is quite unmistakable. Above, the arch-frieze in terra cotta that marks off the roof from the wall does not lack emphasis. The lateral division, into a central and two terminal pavilions, is almost equally effective whether the central feature is crowned with a steep hood, relieved with a crow-stepped dome and rows of spire lights, on the avenue front, or carried up into a picturesque gable on the street front. Though the projection of the pavilions is slight, they are effectually detached by the plainer treatment of the strips of curtain wall, by the separate and subordinate roofing of these, and by the omission from them of the corbelled cornice with its balcony. All the features are successfully studied, noticeably the seven-story oriels of the end pavilions on the street front. The detail is avowedly eclectic, and the general reminder the building gives of the French transitional is due much more to the picturesque composition than to the detail. One might wish for a more vigorous modelling of this detail, especially for a more forcible expression of depth in the modelling in the openings. A certain flatness pre-



WESTERN UNION TELEGRAPH COMPANY'S BUILDING (1883).

Broad St., N. Y. City.

Henry J. Hardenbergh, Architect.



WESTERN UNION TELEGRAPH COMPANY'S BUILDING (1884).

Fifth Ave. and 23d St., N. Y. City.

Henry J. Hardenbergh, Architect.

vents the design from making its full effect. But this is the sole drawback, and it does not prevent the Dakota from being by far the most considerable, architecturally, of all the apartment houses. The agreeableness of its composition and its detail is much enhanced by the agreeableness of its combination of color, the olive sandstone being employed in conjunction with a salmon-colored brick, and the

darker tint being used with unfailing structural propriety to accentuate the design.

Before the Dakota had been completed, the first, or, at all events, the first that counts, of its author's commercial buildings had been begun, the Broad street office of the Western Union company. Its altitude of eight stories seems modest now, with its towering neighbors, but made it

much more conspicuous fourteen years ago. The triple lateral division, doubtless determined by considerations of practical convenience, is architecturally effective and gives the front an impressive scale. Vertically, the composition is not so happy. The single story of stonework is inadequate as the base of an eight-story building, the more as it stands directly upon the pavement. Another story, similar in material and treatment, would have helped the proportion, and enabled the designer to make of his middle section a single and predominant feature. As it is, the composition is fourfold instead of triple, and the relation of the parts lacks the rhythmical result of a division that seems to come of itself and looks capricious and arbitrary rather than necessary and inevitable. It was undoubtedly a mistake to make two middle sections. If the basement had been of two stories instead of one, and four stories instead of three had been included under the segmental arches of what is now the fourth story, the front would have gained the unity which now it lacks. It is only fair to add that the basement is in itself very well designed, as is also the crowning member, including the double square-headed openings of the seventh story, the cornice and the range of dormers. The detail throughout is interesting in design and successful in scale.

It is gratifying to remark that the criticisms we have been making seem to have suggested themselves to the architect from the contemplation of his work in execution, and that when he had a subsequent building to do, for the same primary purpose, and of similar general requirements, he should have obviated them very successfully. For the building for the Western Union company at Twenty-third street and Fifth avenue is, in its kind, one of the most successful commercial buildings we have, and its quaint picturesqueness is the more valuable for seeming to have come unsought from the most straightforward treatment of the problem. Here, although the

height is but of seven stories, two are unmistakably set off as the base, being divided from the superstructure by an emphatic string-course, still further accentuated by a decorated belt of terra cotta below it, and united in themselves by the withdrawal from the plane of the wall of the intermediate floor-line. This is subdued to a mere transom, but is yet of more importance in fact than it appears in the photograph in which it is so nearly obliterated as to give the openings a gaunt and spindling aspect which they do not really present. This is of course on the long side. The narrower front on the avenue, is but of twenty-five feet, about half that of the Broad street building, but it is a far more effective design. The treatment of the lower stage is especially ingenious. The large opening which extends through both its stories is closed by a segmental arch of which the piers seem an inadequate abutment. The abutment is accordingly reinforced and the thrust of the arch counteracted by a tie-rod, at the point where the opening is contracted by corbelling its sides inward. The tie-rod comes just below the floor-line, and is produced through the wall at the corner and emphatically capped with metal. This disposition is emphasized and decorated by the modelling of the piers and the corbels, and by the insertion in the upper and narrower stage of the opening of a light oriel in metal. While evidently proceeding from a structural necessity, and thus relieved of the impression of capriciousness, the feature is one of the happiest bits of our street architecture. The counterparting feature at the other end of the long front is almost equally successful in its way. Here the arcade ceases, the separation of the two stories of the basement united in the arcade is completed and emphasized by the re-emergence at the floor line of the string course of the other corner, and the wall is kept so solid as to provide a visibly ample abutment for the arcade. As is indicated by its separate and subordinate treatment, this end of the building contains the means of



ENTRANCE TO THE ASTOR BUILDING.

Wall St., N. Y. City.

Henry J. Hardenbergh, Architect.

access to the upper stories, and can properly be much more solid than the rest, the solidity being emphasized by the unbroken chimney shaft. Advantage is taken of this fact to diminish the window of the second floor, and to insert in part of its opening a panel which is one of the most idiomatic and successful pieces of decoration in terra cotta that are to be seen in New York. The proportions of the main divisions are just and harmonious. While the central three stories are kept plain, and the ornament reserved for the upper and lower divisions, one of the happiest points of the composition is the alliance between these, the recalling of the base in the design of the attic. This is effected in great part by the withdrawal of the upper story from the plane of the main wall, the substitution of the single opening of the basement for the small opening of the superstructure, the intermediate pier being reduced to a mere mullion,

and especially by the reproduction in stone carving, upon the faces of the piers left in the plane of the principal wall, of the offsets which terminate the piers of the basement. The design of the roof, whether in the gable of the narrower front, or the dormers of the wider, with the characteristic treatment of their brickwork and of the metal in the connecting railing, fitly crowns the edifice.

The Astor building in Wall street is a work of the same period, and in this also the designer profits by the consideration of his own mistakes. The front is of some sixty-five feet, and thus sufficient to allow of an expression of breadth even in a commercial building of eight stories, which was about the vertical limit of commercial buildings a decade ago, far as it has since been exceeded. It was the limit, that is to say, before the steel frame came in to supplement the work of the elevator the limit imposed by the necessity of

employing real walls that would carry themselves, and of subtracting the area occupied by these supporting masses from the available space of the interior. The Astor is a very good example of this transitional class. The main motive is that of the Broad street building we have already considered, an arcade between a basement and an attic, but so much better worked out as to obviate the criticism suggested by the earlier work. Here the basement includes two stories marked by separateness of material as well as of design, dark brown stone supporting a superstructure of red brick, the arcade includes four stories instead of three, and a single plain story intervenes between it and the roof. All this is a decided improvement. Moreover, the additional width gives an opportunity for framing the arcades at the sides with flanks of wall, kept as solid as may be, and, by supplying an evidently ample abutment to the central arches, for imparting an aspect of strength and repose which cannot be gained when an arcade is enclosed only between thin piers. This disposition enables the designer to attain, without forcing it, unity in the upper division. The gable covered with an effective diaper in terra cotta appropriately crowns the central division containing the arcade, while the sides are withdrawn above the arcade and crowned by the main transverse roof. All this is discreetly and skilfully carried out and the result is very satisfactory. Satisfactory also is in general the treatment of the basement, of which the unity is maintained by carrying the piers through both stories unbroken, the floor-line being indicated by transoms of stone corbelled out from the piers. The one questionable point in its design is the reduction of the bases of the central pier into dwarf columns to signalize the entrance. This is disputable, from the awkwardness of the superimposing upon a modelled pier of an unmodelled pier of greater area than itself, and the look of weakness thus given, which is only in part counteracted by

the equally evident fact that the polished granite of the columns is stronger than the sandstone of the piers. It would probably have been better to signalize the porch by an enriched entrance between the piers. But if we waive this, we must own that the columns are very vigorously modelled, and that their detail, as well as that of the shouldered lintel between them, is very clever and happy, and makes up what is in itself an extremely effective feature.

In another noteworthy commercial building of Mr. Hardenbergh's, though this time a store and warehouse and not an office building, at the corner of Great Jones street and Lafayette place, the peculiarity of design we have been criticising in the Astor building is carried very much further. The main structure within two solid flanks of wall at the extremities that seem to be assigned to the staircases and elevators, is a skeleton of brick piers, and each one of these is modelled at its base into a dwarf column like the columns of the Astor entrance, but more squat, since they extend upward only to the impost of the arches of the first story; and since they are here of sandstone instead of granite, they are open to the same objection, logically, with the others, but the force of it seems to be weakened by the powerful effect of multiplication. The rows, four on one front and five on the other, certainly make an impression, and an impression primarily of massiveness, though they are in fact so much less massive than the piers they carry. The design of the capitals and bases, simple even to rudeness, and emphasized by contrast with the more developed modelling of the enclosing wings of wall, promotes this effect. If the scheme is not successful it is certainly interesting and that may be said of the design of the building in general, which presents a number of novelties provocative of interest. One of these is the unusual employment of color. The difference in the tint of the brickwork, light buff and dark brown, is an integral part of the design. The darker color is em-



THE ASTOR BUILDING (1885).

Wall St., N. Y. City.

Henry J. Hardenbergh, Architect.



WAREHOUSE (1892).

Broadway and 51st St., N. Y. City.

Henry J. Hardenbergh, Architect.

ployed to emphasize the structure. The piers that form its skeleton, with their connecting arches, are built of it, and the walls of the pavilions up to the top of the second story, while above this point the walls of the pavilion as well as the wall of the building between them is in the lighter material. This seems logical, but in fact it produces the effect of a frame weaker than the thing framed, an effect which is not dispelled by the expedient of quoining the outer edge of the wall in the darker brick, like giving a strong black outline in a drawing. Undoubtedly the enclosure and abutment of the arcade would be more competent if the outer walls had been laid in the darker brick, but this with the light brick retained in the fifth and sixth stories would have given the building

the effect of being designed in layers, which the designer was very properly anxious to avoid. It is not clear how the scheme could have been better carried out, and yet the execution of it is evidently not satisfactory. Another questionable point is the withdrawal of the plane of the pier as well as of the walls, above the second story, and the masking of the offsets, in the piers themselves, by the canopied gablets. This device serves the purpose of designating the lower two stories as the architectural base, but it seems that it should have been supplemented by a still further differentiation. On the other hand, the treatment of this lower stage in the flanking pavilions is as good as can be, the openings rather emphasizing than enfeebling the solidity of the mass, and

its visible sufficiency as the frame and abutment of the arcade. The upper stages are almost equally good, though the detachment from the building might, with advantage, have been made more complete, and the picturesque crowning features correspondingly more effective. The detail is well studied throughout, and the drawbacks to the complete success of the building are defects in the execution of a scheme as difficult as it is interesting.

A warehouse, which is also apparently a factory, at the corner of Seventh avenue and Fifty-first street, aims, architecturally, at nothing more than inoffensiveness, but it attains this negative object with such success as to make it positively attractive. There is scarcely an ornament in it, excepting the detail of the anchors and fire escapes in metal. The stone capping of the basement piers shows no more elaboration than is necessary to define the stone binders, and the mouldings of the large arches are likewise the simplest possible definitions. The cornice and the transoms that mark the floor-lines in the arcades show patterns that are formed by the bricklayer, and the capitals of the piers are likewise mere exercises in bricklaying. The design resides purely in the disposition of the masses, and is especially exemplary because it is attained with scarcely any interference with the equal spacing of the openings, which in such a building is practically desirable. Yet, by mere force of this disposition, the factory becomes a work of art. The terminal piers are in fact but little wider than the intermediate piers, but they completely assure the eye of their sufficiency. The effect of the building comes mainly from the reinforcement in the design of these angles. Whereas the whole central part of the building is treated as an arcade four stories high, three bays wide on the narrower front and five on the wider, the bay at each end is left plain and unbroken except for the necessary openings, which do not at all impair its effect of massiveness. The difference between centre and wings, though the piers are

in the same plane throughout, is emphasized at the base by the single arch in the second story, and at the top by the withdrawal of the floor-line at the centre from the plane which is kept in the ends so that these count as solid and fortified masses. This work is especially exemplary because of its perfect plainness, and it shows that buildings of a class which are not commonly regarded or treated as works of architecture at all can become so with no other additional expenditure than that of thought on the part of the designer.

None of these buildings, however, is a "skyscraper," in the acceptance of that term, which requires a minimum of ten stories. Neither is any an example of the steel-frame construction in which the structure, instead of consisting of visible walls, is only masked by them. The latest of our architect's commercial buildings is a skyscraper, in both these senses, and it is a great encouragement to find it by far the best of all. Not only that, but it is one of the very few examples we can adduce to show that the skyscraper is artistically tractable, if it be intrusted to an artist. I have already, and in these pages (*Architectural Record*, Vol. V., No. 3), described this work at greater length than is possible under the present limitations. It must suffice here to indicate how unpromising the conditions were for an artistic success, and how such a success has been won in spite of them. The site is evidently inadequate in area as the site of a twelve-story building, and it is not only inadequate in size but irregular in shape. This irregularity seems to deal the final blow at any attempt to make a work of art out of a twelve-story building on such a site. Most architects—even artistic architects—would give it up when the plot of the site was put before them; would content themselves with a "swagger" entrance and an umbrageous and elaborate cornice and a wall between of no pretence of architectural interest. In fact, we have a building which is studied in every story and



THE JOHN WOLFE BUILDING (1895).

Maiden Lane and William St., N. Y. City.

Henry J. Hardenbergh, Architect.

at every point, and so successfully studied that it becomes a highly picturesque object, as impressive in mass and outline as it is interesting in detail. This is a very rare success. And observe, moreover, that the individuality and picturesqueness of the building



LONDON AND LANCASHIRE FIRE INSURANCE CO.

William St., N. Y. City. H. J. Hardenbergh, Ar't.

come not by ignoring or shirking any of the hard conditions of the problem, but by faithfully grappling with them. It is indeed from these very conditions that the individuality of the work in great part proceeds. Out of this nettle danger the artist has plucked

this flower safety. What, at the first view, could be more hopeless than the predicament of an architect required to rear twelve rentable stories at the acute angle of this site and make the result presentable? The difficulties have been so triumphantly overcome that they become factors in the success. Is there anything happier in contemporary work that the art with which the acute angle, bevelled by successive truncations, becomes an equal half of a front which by another truncation gains a central and dominating feature? To appreciate how good it is compare it with the buildings offered by other designers as solutions of somewhat similar problems. Mr. Hardenbergh has here so overcome the difficulties that it is only the critical spectator who infers them, whereas other buildings in similar situations continue, after they are completed, to bristle with the difficulties of the original problem.

Designing country-houses is not perhaps the line of professional employment that is likely to be most conducive to an architect's fortune or to his fame, unless, indeed, he have the luck of building palaces at the summer resorts. But it must be about the most amusing department of design, seeing that the limitations of space and neighborhood that restrict him in urban work are removed, and that he is at liberty to plan his dwelling according to the needs of his client and the lay of the land, and to carry out in his exterior the architectural indications furnished by the plan. The expressiveness and the effectiveness of the result are subject to no conditions except that of expense and of the limitations of his own talent. In proportion to the whole body of his work, Mr. Hardenbergh's country houses are not very numerous or important. Perhaps the most important of them is the house on the shore at Mamaroneck, which those who have seen it will agree to be highly successful. Those who have not seen it will not be able to appreciate it from a photograph which, effective as it is by itself, can show but one of four faces, and can not show at all the de-



COUNTRY HOUSE (1884).

Mamaroneck, N. Y.

Henry J. Hardenbergh, Architect.



COUNTRY HOUSE (1887).

Orange, N. J.

Henry J. Hardenbergh, Architect.



COUNTRY HOUSE (1881).

Babylon, L. I.

Henry J. Hardenbergh, Architect.

pendencies which in fact add so much to the effect of the house and extend it into a "place."

Town-houses, and especially town-houses which, like the great majority, consist, architecturally, only of street fronts, are in a very different category. Here congruity is the first thing to be considered. A clever design, which puts its neighbors unnecessarily out of countenance, and makes the block front of which it forms a part uglier than it would otherwise be is by no means vindicated by its own superiority, or by the fact that it would be good somewhere else. Conformity is here one of the first requisites. Although of course it is not to be demanded of a cultivated designer that he shall reduce himself to the level of an uncultivated designer for the sake of conformity, it is to be demanded of him that his "purple patch" shall not hold the garment up to public odium. It seems to me that in the single dwellings here illustrated Mr. Hardenbergh has kept this civic duty well in view. The dwelling in West End avenue is in place where it stands, although it is by no means fortunate in its imme-

diate neighbors. On the other hand, it would be very much out of place in lower Fifth avenue, while the street front in the latter quarter would be unconscionably queer if it were transported to the West Side. Flanked and surrounded by the demure bourgeoisie of the architecture of two generations ago, it is very discreetly adapted to its place. There is no affectation of reproducing one of the old fronts on the part of an architect who knows better. The new front is frankly half a century later than the old mechanic's work. But it does not show the old any wantonness of insult, and it adds a touch of picturesqueness to the prim respectability of its predecessors without disturbing that quality. A less hampered design, though still architecturally only a street-front, is the dwelling in Newark, in which the sacrifice of symmetry to convenience, though emphasized by the return to symmetry in the upper stories, does not entail weakness or lack of repose, while the detail in terra cotta is interesting and ingenious and the double loggia of the upper story is a notably effective feature.



Newark, N. J.

DWELLING (1887).

Henry J. Hardenbergh, Architect.



Roxbury, N. Y.

JAY GOULD MEMORIAL CHURCH (1894).

Henry J. Hardenbergh, Architect.



Otsego Lake, N. Y.

WATER TOWER.

Henry J. Hardenbergh, Architect.

A much more complicated problem than the design of a single street-front is the design of a row, so as to preserve a unity of aspect while individualizing the various dwellings that make it up. A generation ago this was not a problem at all. The speculative builder who at that time housed the well-to-do of the population of New York, after his draughtsman had produced one elevation of a brownstone front with the conventional "trimmings" merely repeated that front in the same material as many times as he had houses to build. Unity was doubtless thus preserved, but inasmuch as the single design that was repeated was of no interest whatever, it became extremely dismal by repetition. There are few things more depressing than a blockfront in a fashionable quarter, erected between 1860 and 1880, and it may well have seemed that nothing could be worse. But worse remained

behind. When the West Side was opened for settlement and the speculative builder was credibly informed that the buyers and even the tenants of dwelling houses demanded "variety" in the fronts, he set himself to supply the new demand by instructing the same incompetent draughtsman whom he had before instructed to make the fronts all alike, to make them all different. The results were awful. Instead of producing mere melancholy the new order threatened the reason of the spectator, and in contrast with the wild work of the draughtsman goaded to be various, his tame work when he was allowed to be monotonous seemed to take on repose and dignity. The just mean was not for him to attain. Of the comparatively few competent architects who have striven to attain it Mr. Hardenbergh seems to me to have been pretty clearly the most successful.



DWELLINGS (1887).

Lexington Ave., New York City.

Henry J. Hardenbergh, Architect.



DWELLINGS (1883).

West 73d St., New York City.

Henry J. Hardenbergh, Architect.

There are scattered about New York, and especially in the region between the Park and the East River, a considerable number of rows, of from three houses to three times as many, of which the design identifies them as his work by those who are familiar with it. They are decorous edifices, of which the detail shows study and refinement, but in general the houses in each row repeat a single design. In two conspicuous instances, however,

the taller apartment house at the corner of Ninth avenue, which is included in the architectural scheme. The effect of unity is given by the facts that the two-story basement of olive sandstone is continuous from one end of the row to the other, emphasized at the ends by including an additional story, and that the moulded cornice of the same material is continuous, except where it is suspended to admit of the treatment of the upper story as part of the wall and not as a roof story. The differences are enough to secure variety without carrying it to the point of violence. The second story of each dwelling shows a feature, which is now a corbelled oriel, now the upper stage of a two-story bay, now a projecting window in stonework, and now a recessed arch with a balcony. Continuity is again preserved in the similar design of the third story throughout, and variety again secured in the treatment of the crowning story sometimes as a full fourth story with a hipped roof, sometimes with a gable occupying the whole front, or a gabled dormer, or two separate dormers relieved against the mansard roof. These devices avail to avoid monotony without disturbing repose. Another expedient for avoiding monotony, though quite effectual for its purpose, is more questionable, and that is the use of different tints in the brickwork of the superstructure, red brick being employed in rather more than half the fronts and buff in the remainder, though the party wall is in every case indicated by a line of quoining. Upon the whole, it is likely that the row would have seemed monotonous without this device. The occasional interpolation of a lighter front in the monochrome of red would be enlivening, but the mass of the two materials, though it is not equal, being about in the proportion of one and a-half in the stronger tint to one of the weaker, is perhaps too nearly equal for the best effect. Another defect, which is also a defect of the Dakota, as we have noted, is a want of decision and vigor in the modelling of the detail, and this entails a certain tameness.



DWELLING (1894).

West End Ave., New York City.
Henry J. Hardenbergh, Architect.

he has gone further and attempted to make a composition of a group of dwellings while distinguishing the components. The earlier and the more extensive of these is the block-front opposite the Dakota, lining the north side of Seventy-third street from Eighth avenue to Ninth. There are twenty-seven of the dwellings, besides



DWELLING

Fifth Ave. and 80th St., New York City.

Henry J. Hardenbergh, Architect.

But this defect does not prevent the treatment of the row from being in many respects a model, the more creditable to the designer when we consider that it is a work of 1884, when there were no precedents for such an attempt at unity in variety, and when the choice was between rows depressingly tame and rows outrageously wild. This work set a precedent, and a valuable precedent, albeit neither its author, nor, so far as we recall, any other designer, has been encouraged to repeat its most striking peculiarity, the change of material. It would no doubt have been better if the color had been used to accentuate the architecture, in particular if the ends of the row had been in the stronger color, and if this had been employed throughout to emphasize divisions and projections, while the intervals were left in the weaker, the actual arrangement being the reverse of this.

For which reason, among others, a later work in the same kind, a group of dwellings at the corner of Lexington avenue and Eighty-ninth street, seems to me more successful than the earlier essay. There are eleven houses on a plot 150 feet by 100, and they are consequently less spacious than those we have been considering. Seeing that the plan involved the occupancy of the corner by two sides of the nearly square house which is considerably the largest of the group, it is evident that the remaining houses must be packed very closely, and in an attempt to individualize them while uniting them into a group the danger was of a huddled effect. It cannot be said that this danger has been entirely avoided. They do look crowded, especially upon the longer front, and that is the chief drawback to the complete success of the group. But when one considers the conditions, the wonder is that the designer was able to attain so much as he has attained of breadth and repose. This is largely the result of the fortunate treatment of the corner house, in which at the most important point of his composition, he was able, without any practical sacrifice, to retain

considerable masses of virtually blank wall, and to get a notably massive pier at the angle itself. Above this the three-story oriel, with its steep hood, not only makes a very picturesque combination with the steep gable on one side of it, and the expanse of roof on the other, relieved by its unequal dormers, but it supplies a central and dominating feature upon which the two fronts may converge. This it does



DWELLING (1884).

Lower Fifth Ave., New York City.

Henry J. Hardenbergh, Architect.

very successfully, and the success is a proof of the care with which the design has been studied in perspective as well as in elevation. Each front is, moreover, in itself a composition having an effective balance if no formal symmetry. The end house in each is projected enough to denote that it is the terminal feature, and the interme-



ADELAIDE APARTMENT HOUSE (1887).

635 Park Ave., New York City.

Henry J. Hardenbergh, Architect.

diate houses treated as a curtain wall between two pavilions, while they differ quite sufficiently among themselves. One might say that they differ too much among themselves. On the long side the division adopted, no doubt, from a consideration of the probable preferences of tenants, of the houses into "high-stoop" and "base-ment" made impossible the carrying through of any horizontal lines, even of the line of a common cornice. The shorter front, in which the main lines are continuous between the pavilions, is for this reason the more effective composition, although compared with almost any other effort of the same kind the long front is very successful. The most decided advantage these houses have over the earlier row is in the character of the detail. There is here no lack of vigor and spirit in the modelling, and the successful adjustment in scale of the features and the detail shows the more practiced hand. The things, the crow-stepped gables, the shell-frieze in terra cotta, the balconies, and the porches, all good in themselves, are all better in their places. This, no more than the earlier work, aspires to the praise of academic correctness, and many of its features are of the French Renaissance in which that may be said, though very loosely, to have been designed. But along with the shell-frieze appear here the crow-stepped gables and other features that tell of a Batavian origin and are certainly of a quaint and attractive domesticity. This unpretentious group of dwellings is not the least successful of its author's works, while it is one of the most exemplary.

One curious result of the elevator and the Chicago construction has been to diminish the architectural importance of public buildings. A municipal "institution," when it comes to house itself, has the choice between putting up a building impressive by its magnitude, indeed, even among its purely money-making neighbors, but in which its own quarters are merely an incident, and putting up a building for its own exclusive use, and no bigger than

it needs, which will be dwarfed by the neighborhood of more impressive buildings for less impressive purposes. Neither horn of the dilemma is really eligible, and the dilemma is not conducive to the construction of a city, in which the magnitude of buildings should bear a proportion to the importance of their uses. But of the two it is more to be desired that an institution should house itself by itself, at the risk of being effaced by towering neighbors, than that it should efface itself by occupying only a small part of its own building. The Fine Arts building is a case very much in point. The dimensions of its front are not far from those of the front of the old Academy of Design, which is indeed no taller than the dwellings that adjoined it when it was built, but which then dominated them by force of architecture, although it has lately been belittled by a commercial neighbor. The Fine Arts building, though built in what is still a residential quarter, is overborne by the huge and ugly apartment house which almost adjoins it. But, in this case as in the earlier, the smaller building is difficult to kill. The Fine Arts building is noteworthy among Mr. Hardenbergh's works as the only one, so far as I know, in which the main motive of the composition is borrowed. This is quite frankly and avowedly a copy of the so-called House of Francis I. at Paris, of which not only the composition but the scheme of decoration and some of the detail is reproduced. The original, however, is but of two stories, and without a visible roof, the third term of the proportion being supplied by the revetment of the terrace with its balustrade upon which the building stands. The place of this is taken in the reproduction by a basement which unfortunately the practical exigencies compelled the designer to make the most open and least massive division of his front, to attenuate the terminal piers to the limit of safety, and to impair the force of his main motive, an open centre between solid wings. The impairment is reduced to its minimum by the perfect simplicity



OFFICE BUILDING (1893).

Front St., New York City.

Henry J. Hardenbergh, Architect.

of the treatment of the lower openings, but it is necessarily injurious. Another addition to the original is the visible roof, and the treatment of this is not so fortunate. It is pretty plainly either too important or not important enough. The treatment or the lack of treatment indicates that it is meant to be as much as possible ignored. But as it is not possible wholly to ignore it, it seems that it would be the better for a crowning feature which should emphasize the disposition of the main wall. Here this is continued only by the opening in a balustrade of the centre of a parapet left solid at the sides. This, like the powerful cornice underneath, is an innovation, and a happy one. Although the front of the Fine Arts building makes something of the same effect of a union of massiveness with elegance that is made by its original, it is by no means so ornate, and lacks the chief enrichment of the belt of sculpture between the two stories, a feature which would especially lend itself to the plasticity of terra cotta, albeit the front of the Fine Arts building is in cut stone. In spite of the abatements it is a taking front and an addition to the short list of our public buildings that are worth talking about.

By far the most conspicuous and familiar of Mr. Hardenbergh's works are the three great hotels which have been erected in the middle part of New York from his designs since the elevator and the steel frame have done their perfect work. The series furnishes an interesting exemplification of how fast we have moved in these things, for the Waldorf, the eldest of the series, is scarcely five years of age, and yet it is already somewhat antiquated by its towering neighbor. Not that in the interval any radical novelties in construction have been introduced, but that architects have been emboldened to push the existing system further towards its logical development, a development which at present seems to be arrested, it would be hard to say why, at fifteen stories. In hotels, at all events, this seems to be the *non plus ultra*, and it

seems likely to be the accepted ultimate in commercial building, in spite of the almost necessarily un-gainly exceptions. To multiply by three the capacity of a given piece of ground is a sufficiently revolutionary performance to be accomplished within a quarter of a century, and to minimize the architectural dislocation



HOTEL ALBERT (1883).

University Place, New York City.

Henry J. Hardenbergh, Architect.

entailed by it a sufficiently trying problem for designers.

In the Waldorf the architect essayed a picturesque composition, in which symmetry is abandoned in favor of the predominance of the huge mass at the corner to which the wing of the street front is distinctly subordinated, and from which it is detached by the recessed centre. From



WAREHOUSE (1894).

West 23d St., New York City.

Henry J. Hardenbergh, Architect.



WAREHOUSE (1893)

Arch St., Philadelphia, Pa.

Henry J. Hardenbergh, Architect.

the assumed point of view, the point of view from which the illustration is taken, this disposition is not without its effectiveness, but it has the drawback of sacrificing the elevations, or at least the longer elevation, to the perspective. By consequence the Thirty-third street front comes to lack coherence and unity, and is not in itself an architectural composition, nor has it become more nearly a composition by the extension of it to the westward since the hotel was built. The interest of it is in the parts, which do not constitute a whole. This interest, however, is very considerable. The central feature, the recess with its loggie and its turret, is a picturesque and attractive design, in which some Italian detail does not interfere with the general expression of homeliness and quaintness which characterizes the German Renaissance, and which is enhanced by the treatment of the roofs. Above the cornice-lines, indeed, the design is almost un-faillingly successful. The subdivision of the taller eastern wall into two fronts is less successful, and is confused and weakened by the fact that the pier by which the division is marked stands upon a void, the entrance, which is the largest opening in the front. On the other hand, the roof-treatment is equally distinguishing and fortunate. To set the gabled front of a three-story North German dwelling bodily above the cornice of a huge nine-story schloss by way of dormer was a bold device quite justified by its results. The avenue front is, as a whole, much more successful than the street front, having a general symmetry that is not impaired but only made piquant by the differences entailed by the occurrence of the turret at one side balancing a flank of plain wall at the other. This front has a stateliness with its picturesque-ness that makes it impressive even now that its importance has been diminished by its huge overtopping neighbor.

It was in the interior of the Waldorf that its architect rendered a very considerable public service which, although we are dealing only with ex-

terior architecture, it would not be fair to pass over. The architect's own work in the interior of the Waldorf is as noteworthy as anything in its exterior. The open court at the centre and its dependencies are among the most artistic examples of his design and of high interest. But the uniqueness of the interior is that in it, for almost the first time, a systematic attempt was made to secure in a hotel decoration that had a more artistic value and a more serious purport than the journeywork which it had been the rule to employ. The value of such an attempt is not to be measured by the actual success of the experiment, so it be successful enough to be encouraging. Of this there is no question in the Waldorf, which shows some instances, and very notably the café, or more properly the "weinstube," in which the indications of the architecture are skilfully and appreciatively carried out in the decoration. Nowhere else perhaps is the success quite so complete, and there may be even instances in which the work of an easel-painter suddenly summoned to do decoration shows an amateurish quality that makes the beholder regret the absence of the less sensitive journeyman who had learned his trade, and was aware of its conventions.

The Manhattan has much less architectural pretension than the Waldorf. It is in fact the conventional skyscraper, as straightforwardly treated as is possible for the masonry veneer of a concealed metallic construction, and it conforms to the accepted division. A three-story base, itself subdivided, sustains a shaft of nine stories and a roof division of two. It is well adjusted in proportion and in scale, but offers no salient points for comment. In the interior, however, the designer has repeated the experiment of the Waldorf, and has secured the aid of competent hands in the broad symbolical frieze of the entrance hall, in the frieze of the café, and in the successfully sumptuous dining-room.

We may hope to see these experiments carried further and to a still



HOTEL WALDORF.

Fifth Ave. and 33d St., New York City.

Henry J. Hardenbergh, Architect.



IN THE WALDORF HOTEL.



VIEW IN DINING-ROOM, WALDORF HOTEL.



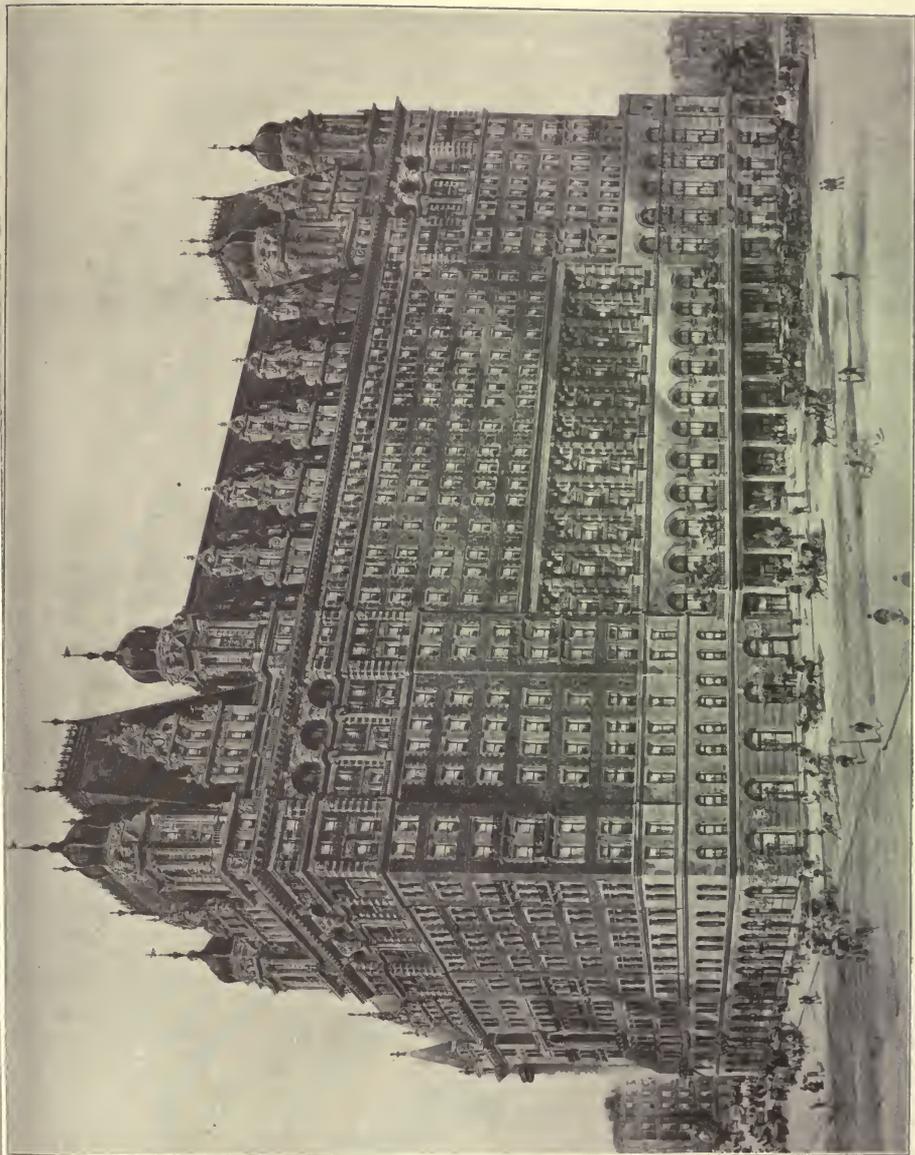
THE NEW BALL-ROOM, WALDORF HOTEL.



DETAIL IN CAFE, WALDORF HOTEL.

more conclusive success in the new hotel that adjoins the Astor and that, even in the incompleteness it exhibits at this time of writing, challenges the comment of the wayfaring man. It is quite impossible to ignore it, and, indeed, even in these days, its bigness is overpowering. Luckily it is bigness, and not an exaggeration of one dimension. On the avenue the narrower front may be nearly twice as high as it is wide, taken by itself. But it is so far incorporated with the Waldorf by a common base and a common cornice-line that the whole block-front helps to sustain its height, while upon the street front the lateral extent is ample even for fourteen stories. The attempt at picturesque irregularity of outline, which in the Waldorf was made with but partial success, has in the larger and later structure been frankly abandoned in favor of a formal symmetry. Each front makes the impression of symmetry in spite of the indication at one end of a huge feature including three stories which has no counterpart at the other. This long front cannot fail to make an impression, though there is much variety in the impression it makes. I find it extremely successful. In spite of the formality of the general composition, the impression is of an exuberant pic-

turesqueness, such as we find in the full blown Renaissance of North Germany and the Low countries. Though the detail is classic nothing could be further from the spirit of classic architecture than the aspect of the front. The three-story order of the centre shows the Teutonization of Hellenic forms which characterizes the whole performance. It is not so irresponsible, however, as the extreme German examples, as the Zwinger palace at Dresden. The later designer is restrained from the extravagances of the earlier by an abiding sense of structural significance which prevents him from doing what has no meaning, as well as by the tact that is most of all needed where a designer is not restrained by his "style." The essential motive of the new building may perhaps be found in the necessity for some conspicuous feature to differentiate the building from its lower neighbor above the cornice line, below which it conforms to that, but above which it cannot conform. Such a feature is supplied in the tall triple arcade, which, repeated on the adjoining side, becomes the feature of the terminal pavilion and repeated at the other end frames the front. Of the crowning of these features it doth not yet appear, except from the drawings, what



Fifth Ave. and 34th St., New York City.

THE NEW ASTOR HOTEL
(Now Building).

Henry J. Hardenbergh, Architect.



MANHATTAN HOTEL (1896).

42d St. and Madison Ave., New York City.

Henry J. Hardenbergh, Architect.



ENTRANCE HALL, MANHATTAN HOTEL.



IN THE ENTRANCE HALL - MANHATTAN HOTEL.



IN THE MANHATTAN HOTEL.



THE DINING ROOM - MANHATTAN HOTEL

it shall be, but these indicate that the roof will be much the most exuberant part of the design. The wall between these features is properly kept as plain as possible, the central feature, the arcade with the colonnade beneath and above, being confined to the lower division, which in turn is flanked by walls as simply treated as may be. The result of these dispositions is a front undeniably pompous and even swaggering, which yet has an aspect of homeliness and quaintness that is very taking. If what remains to be done carries out the promise of what has been done already, the success of a daring essay will be secure.

It is worth while pointing out that the success of this work, in which liberty of design goes at least to the verge of license, could not have been attained except by a designer trained in much severer tasks, that the magnified detail, and the intentionally baroque crowning features, would have been offensive if the solidity and repose and balance of the structure they crown had not been already assured. It is only the disciplined designer who can allow himself these perilous freedoms.

One can fancy, with shudderings, what an undisciplined designer would

have made of this scheme. Perhaps it was John Root's recognition, in the "eclectic" work of a fellow-architect, of the advantage of substituting self-restraint for the artificial regulation of the styles, an advantage to which his own work bore striking witness, that accounted for the hearty admiration of Mr. Hardenbergh's. I have heard him express. At any rate one may say of Mr. Hardenbergh's successes that they attest in a peculiarly high degree the value of restraint and discipline. Some of his earlier work we have found lacking in animation, but that is evidently a "good fault" in work which in spite of it manifests individuality and compels interest. It is the solicitude to be on the safe side which has enabled him to carry off with success enterprises which were so venturesome as to involve a distinct risk of failure, such as the design of the Wolfe building, and, so far as we can judge it now, of the new Astor hotel. In Mr. Hardenbergh's work the evidences of an individual talent are accompanied by the evidences of tact and measure and discretion; and his most characteristic work is on this account as exemplary as it is interesting.

Montgomery Schuyler.



CONSTRUCTIVE ASYMMETRY IN MEDIEVAL ITALIAN CHURCHES.

IN a preliminary Paper on "Optical Refinements in Medieval Architecture" (Vol. VI., No. 1, of *The Architectural Record*), announcement was made of a series of observations in Medieval Italian churches, which it is the purpose of the following Papers to treat in more extended detail. These observations have been classified under the heads of "Perspective Illusions" (in the last issue); "Constructive Asymmetry" (the present issue); "Horizontal Curves;" and "Vertical Curves and Vertical Leans." Both of these last two topics, assigned to future Papers, may be regarded as phases of constructive asymmetry, but in the present Paper this subject has been confined to the cases of constructed asymmetry in the dimensions of arcades and arches, in oblique horizontal lines and in ground-plans.

As an introduction to this topic, a few words are in place about those irregularities of Italian medieval architecture, which are the result of rough and careless building and of the use of heterogeneous materials from ancient ruins.

In the first centuries of church architecture the Pagan Roman buildings were the quarries of church building material, and their remains were often recombined in the most expeditious and consequently haphazard fashion. In many early basilicas, columns of all sorts and sizes are fitted with capitals which were not made for them. Even if new capitals were made, they were frequently not calculated for the diameter of the columns on which they were placed. The basilica of S. Lorenzo, at Rome, offers an illustration of the rough fitting together of blocks of ancient archi-

traves, borrowed from various sources. The church of S. Giorgio in Velabro, at Rome, will also illustrate the haphazard use of ancient columns and capitals. In churches of this class, we must allow a wide latitude for variety of dimension, as due to carelessness or haste, or to the re-use of old heterogeneous material. In such buildings the evidence for constructed asymmetry must lie in some scheme of arrangement whose features forbid the hypothesis of accident. For instance, it is wholly improbable that both aisles and also the nave of S. Giorgio in Velabro should all narrow in one direction by chance, to the total sum of about 18 feet (see Fig. 21 in the preceding Paper). That the given device is the same as that found in a series of other cases is also a contributory proof of design. In this church, however, the construction is so rough that we could not argue constructive asymmetry from the irregular dimensions of arches or intercolumnar spacings, because the evidence of intention gathered from the comparison of measures in the intercolumniations is of doubtful character.

There is, however, evidence of constructive intention in the columnar arrangements of S. Saba at Rome, where the building material and building methods are equally rough. The columns are arranged on both sides in a curved line, dropping heavily on both sides toward the choir. (See Fig. 23 of the last Paper). An arrangement of columns of irregular heights in such a way as to make a pronounced curve in elevation could not be due to chance, especially when found on both sides of the church, and when so arranged as not only

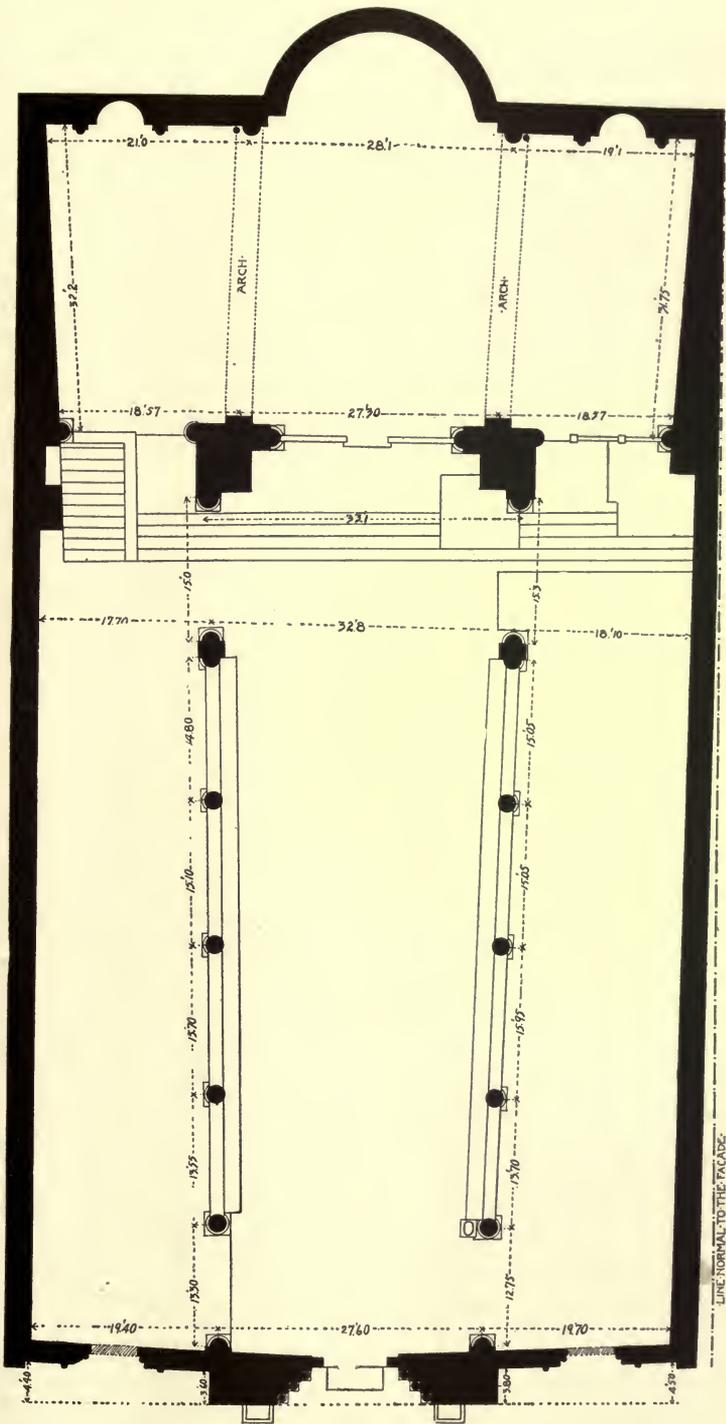


Fig. 1.—PLAN OF S. PIETRO, TOSCANELLA.

to offset a constructed rise of the pavement, but also to exaggerate the resulting convergence of lines.

That this constructed convergence of lines is found in many well-built churches is also contributory proof of purpose.

In like manner the columns used in the church of S. Maria Ara Coeli at Rome are of irregular sizes, but the fact that they are arranged on a pavement sloping upward toward the choir (with a pitch of over 3 feet for the whole length of the church) in such a way as to allow the construction of horizontal lines of arches, is a clear proof of constructive intention (see Fig. 22 of the last Paper).

These cases, from a class already disposed of, show that proofs of intention in the matter of irregular building can be offered from churches whose building materials are heterogeneous and roughly put together. The position of modern criticism has been, so far, wholly adverse to the possibility of optical refinements having been employed in medieval work; first, because obviously rough work in the construction of certain churches in certain particulars (due mainly to the use of borrowed materials) has been presumed to indicate indifference to optical effects in other particulars in the given churches; second, because obviously rough work in certain churches has been assumed to explain all cases of irregularity of construction in other churches, in which, as a matter of fact, the masonry indicates careful construction, and in which, as a matter of fact, the measurements prove careful construction.

As to the presumption that the use of heterogeneous materials implies indifference to appearances or to artistic effects, we may take a case from S. Pietro, at Toscanella, which has no reference to the perspective illusions discussed in our last Paper.

Some of the capitals in this church are antique and some are medieval and all are of irregular size and varying

design, but it is perfectly certain that there was purpose in an arrangement which placed these capitals in corresponding pairs on the sides of the nave so that two Ionic capitals, two Corinthian capitals, and two medieval capitals, of similar, though not identical design, are brought to face one another. From this example, it appears again that irregularity of one sort does not negative purpose of another sort. Carelessness as to correspondence of details in one point—say in exact similarity of design—does not argue carelessness as to arrangement. To put it in another way, artistic preference for variety of details is not carelessness at all. There were many different standards of masonry refinement and of accuracy in measurement in medieval buildings, some due to period, some due to locality, some due to wealth or poverty, and some due to the personal influence or character of the individual builder. The most important element of the problem is the presence or absence of Byzantine subtlety. Byzantine design is the most systematically irregular and the least obtrusively so. All these things must be considered, and must be considered afresh in face of each individual building, when we speak of medieval irregularities, never forgetting that there was in many medieval buildings—however great the refinement of masonry and detail—a grand and artistic indifference to regularity, considered as an ideal or standard of perfection, which will explain a great many facts.

Modern students have so far overlooked or neglected an enormous number of facts which are not very easily collated or collected. Then they have jumbled together in their conception of medieval building three different phases of irregularity, viz.: first, rough work and the use of heterogeneous material from older buildings; second, irregularities which are part of schematic arrangements; and third, intentional irregularities without schematic arrangements. If we take the standpoint of the medieval builder

himself, we shall find no inconsistency between indifference to regularity in one place and purposely constructed irregularity in another. For his make-up both these attitudes were interchangeable and matter-of-course.

Indifference, or careless building, or the use of heterogeneous materials cannot be called up as explanations when we are dealing with measurements, which show the existence of a scheme. The perspective deceptions so far quoted, in the preceding issue, bear, on the face of things, that evidence of design which is furnished by a scheme, i. e., by an arrangement of measurements which the law of chances would lead us to suppose could not be accidental in one case and which certainly could not be accidental when found in a series of repetitions. But evasions of regularity were also practiced from a definite artistic feeling and purpose and generally without the design of obtaining an effect of dimension by palpable trickery. Here is an illustration from the basilica at Palaja. (Palaja is reached by carriage from Pontedera, which is on the railroad between Florence and Pisa.) The measures for the interior pier spacings in metres and centimetres on one side of this church, beginning at the entrance and moving toward the choir, are as follows:

4.92; 4.87; 5.11; 4.86; 4.92.

These measures were taken hastily, and yet the first bay and the last bay tally exactly; the measurements next adjacent tally within a centimetre. The middle bay is largest by twenty-four centimetres, or say ten inches. We will not debate the purpose at present. The proof offered is the proof of intention. Where is the objector who will say that the larger arch is due to careless building, when the measures tally within a centimetre for the corresponding pairs on either side of it?

Another illustration may be taken from San Pietro, at Toscanella, just quoted for the case of its capitals (Fig. 1). The measures are given in feet

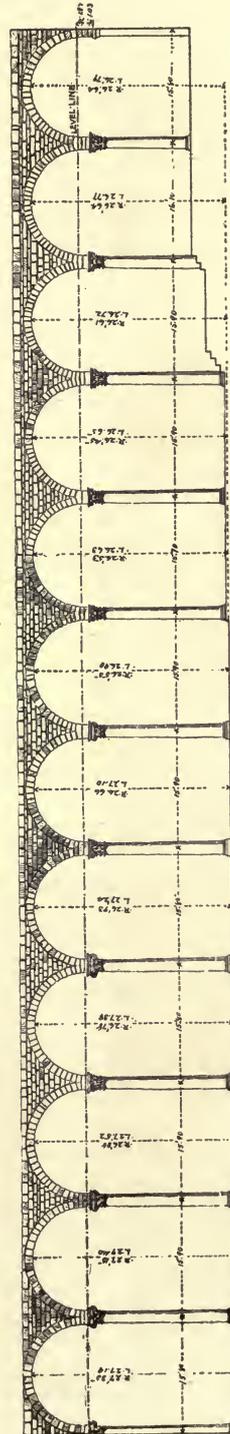


FIG. 3.—SECTION OF SAN FREDIANO, LUCCA.

The arches and capitals drop toward the choir on both sides. The pavement steps up, at three different points, in the same direction. The intercolumniations show accurate building in most of the bays to 1-10 of a foot. The extreme limit of error is 3-10 of a foot.

and decimals and represent the pier spacings, beginning at the entrance:

Left, 13.30; 13.55; 15.70; 15.10; 14.80; 15.

Right, 12.75; 13.70; 15.95; 15.05; 15.05; 15.30.

On both sides the second span is larger than the first; on both sides the third span is larger than the second; on both sides the fourth span is narrower than the third; on both sides the sixth span is wider than the fifth. These correspondences cannot be accidental.

The proofs that Italian builders constructed irregular designs with malice aforethought can be multiplied indefinitely when detail measurements are taken and compared. Another proof is offered from the survey of San Michele ai Scalzi, at Pisa. The reader is asked to consult the measurements of the sections (Fig. 2), noting the following facts. The columns and capitals are taken from ancient buildings and are so heterogeneous that many variations of dimension will be due to the irregularity of materials used. We next notice that the largest arch defines the span needed for the dimensions of the choir. The arches drop toward the choir, but so slightly that the intermediate irregularities and breaks in the scheme would forbid the drawing of conclusions from this one fact. The columns are, however, selected in such a way that the capitals drop between two and three feet on both sides of the church in the last three bays toward the choir. This arrangement of capitals has so many parallels that it is certainly a perspective device. The minor variations of measurement speak for themselves. The measures for the arcades of the exterior façade are here given in metres (whereas the interior survey measures are in feet and decimals):

2.27; 2.36; 3.33; 2.36; 2.30.

The centre measure represents the arcade of the doorway. On either side of it the arcades diminish in span in corresponding gradation. These measurements prove that an allowance of

three centimetres, or a little over one inch, will represent the amount of error due to carelessness in the interior, because the arcades on either side of the door correspond exactly, and the outer arcades vary in measurements only three centimetres.

Mr. Penrose has fixed the limit of error in the masonry of the Parthenon at 1-50th of an inch, by comparing the measures for the two opposite ends of the building, which tally within that limit. By similar means we may often fix the limit of error due to natural causes in a medieval building. It can be shown that three inches is a fair allowance for the irregularities due to natural causes in churches where no refinements have been detected; for instance, in the bays of the cathedrals of Milan, Bologna and Florence. This appears from a comparison of dimensions which in these churches were certainly intended to be equal.

In S. Frediano, at Lucca (Fig. 3), there is a scheme in the arches, which drop toward the choir on both sides of the church (and the pavement steps up at three different stages before the choir is reached), but in this church there is no scheme in the spacings. The measurements of intercolumnar spacing in this church, which has twelve bays, tally within 2-10 of a foot. This will be the limit of variation due to accident in this church, which is more roughly built than a great many which could be mentioned. In the cathedral of Arezzo, where the third bay is four and a-half feet narrower than the two first bays, and the sixth bay is seventeen feet narrower than the fifth, we can show that the limit of error due to accident is 2-10 of a foot. The measurements on the two sides of the church tally for every bay in the church to that degree of exactitude or inside of it. (See Fig. 13 of the last Paper.)

A comparison of measurements for the bays of the nave in the Siena Cathedral (Fig. 4) shows accurate cor-

respondence within 3-10 of a foot for the second, third, fourth, and fifth pair. We are justified, therefore, in arguing purpose for discrepancies of measurement in the bays crossing the transept, which show a variation in one case of two feet. In speaking of these discrepancies Jacob Burckhardt, the greatest living authority on the subject of Italian art, says in his *Cicerone*: "Der Dom von Siena . . . empfängt den Beschauer gleich mit einer Reihe von Räthselfragen, welche der Verfasser so wenig wie die meisten Andern zu lösen im Stande ist"—"the Cathedral of Siena meets the observer with an array of riddles which the author is as little able to solve as a number of other people."

A comparison of the intercolumniations on opposite sides of the nave in S. Bartolomeo at Rome shows the extreme limit of error in that church to be 3-10 of a foot (Fig. 14).

A comparison of exterior arcade spacings in the Pisa Cathedral will prove very instructive (Fig. 5). On the west side of the south transept the measurements tally in five bays to 3-100 of a foot. On the west side of the north transept they tally to 12-100 of a foot. This gives a fair estimate for the limit of error due to accident elsewhere. Now let us take the exterior sides of the cathedral and examine the spacing of the arcades. On the south side, beginning at the façade, the first bay measures 11.18 (feet and decimals). The bays diminish with slight irregularities of intermediate measurements to 9.40 at the sixth bay. *On the opposite north side* the same bays diminish from 11.16 to 9.06. This arrangement cannot be accidental, nor can it be accidental that on the opposite sides of the church the measurements run for nine bays (including the sixth), at 9. decimal, and then rise on both sides in the last bay next the transept to 10. decimal.

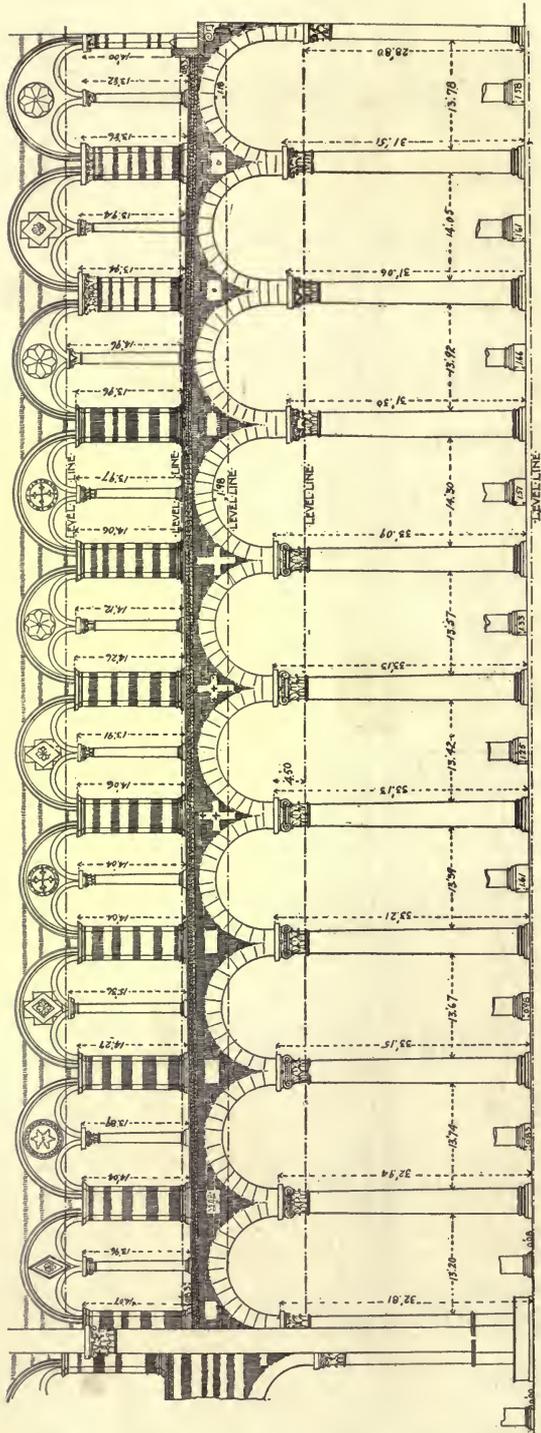
As incommensurate measurements and incommensurate spacings, both with and without a scheme, are already known to be intentional in the Greek

temples,* we derive a fair argument from the transept measures of the Pisa Cathedral, that any variation above 12-100 of a foot on the sides of the church is intentional.

Let us next examine the intercolumnar spacings of the nave (Fig. 5). On both sides of the nave we begin at the entrance with 15. decimal. On both sides we find at the second bay 17. decimal. On both sides we find the fourth bay to have the widest span with 17. decimal. On both sides we find the measures diminish beyond this bay. On the south side they diminish from the fourth to the ninth bay 68-100 of a foot. On the north side they diminish in the same distance 45-100 of a foot. (The comparisons for the tenth bay are best taken from the gallery levels (Figs. 6, 7), where we shall find the measures are taken between columns, whereas on the plan they are taken between centres, and the last measurement runs only to the surface of the piers.)

If we compare these intercolumniations with the heights of the arches (see gallery levels, Figs. 6, 7) we shall find them to be connected with a scheme on both sides of the nave, by which the arches drop gradually on both sides, towards the transept, but with the maximum drop lying between the fourth bay and the tenth; amounting to 1.98 on the south and 1.64 on the north. To this again corresponds on both sides a bend in the galleries, which occurs on both sides over the third column from the entrance and for which the measures are entered on the surveys. Above the gallery bends the schemes vary. In the south gallery the piers rise and then drop with the gallery and the small arcades adhere to the same scheme. On the north side the gallery piers are built to a level for the first four bays near the façade, so as to offset a rising pitch of eight inches in the cornice of the gallery on which they stand; they then drop gradually and continuously for the

*See "Architectural Record," Vol. IV., No. 4, "Origin of Greek Horizontal Curves."



whole distance between the fourth bay and the transept. The small arcades follow the same line, but with a more pronounced pitch. The small columns, of varying sizes, as due to their derivation from Sicilian ruins, are arranged on both sides, partly to accent and partly to break up and vary the schemes which are already sufficiently perplexing. The smaller columns on the south side are arranged to exaggerate the rise and fall of the gallery cornice; on the north side they adhere with minor variations to the pitch of the arches and piers. The perplexities and mystifications of the eye are still further increased by a wilfully broken system of masonry stripings in which no pier has a regular system of striping, either as regards itself or its neighbors (see Figs. 6, 7). (On this head it must be remembered that the regular stripes above the gallery piers, of which very little appears in these sections, are modern coloring and not ancient masonry.)

From the facts so far brought out in this part of the argument, it appears that a purpose can be proven in many irregular arrangements of the Italian Romanesque; first, by showing that correspondences of irregularity can be used as a proof of intention; second, by showing that there are means, in many cases, of fixing a limit of error due to accident; third, by urging the point that we cannot admit the purpose of definite schemes in one part of a church and assert at the same time that the builders did not know what they were doing in another part. We have, for instance, such proof of the use of the same definite schemes in both gallery levels of the Pisa Cathedral in some cases, as to indicate that a different scheme was purposely employed in each gallery in other cases.

The Pisa Cathedral is a remarkable illustration of three different phases of irregular building. Its materials are largely heterogeneous and combined with a magnificent disregard of formal correspondence. The columns of the nave, for instance, are of irregular sizes

from causes wholly outside the control of the builders. On the other hand, many features of the building show definite planning for definite optical effects in a given direction, for instance, the lines of the nave arches. Experts in optics will admit that the gallery bends produce an effect of dimension in both directions. I believe that most of the irregularities were intended for effect in any and every direction; in other words, that they were intended to produce an optical mystification. This is, no doubt, contributory to an effect of increased magnitude, but there is a subtlety in the means adopted which allows us to use the term of optical refinements in speaking of them. When we come to the subject of curves in greater detail, which is already suggested by the bends of the gallery lines, we shall be able to show that optical refinements were used at Pisa and elsewhere in Italy, in the exact sense which applies to the Greek temple refinements.

It is not necessary to assert that an optical theory was present to the minds of the Italian Romanesque builders, in the matter of every intentional irregularity, but it is clear that their ideal of art was to make every part of a building interesting to the eye by giving to every part some subtle variety of form and aspect. That an optical mystification is produced by such a system of building can be argued from some of the experiences of our own survey.

In the south transept of the Pisa Cathedral the columns on the west side average two feet and a-half higher than those on the east side of the same transept. The explanation is that when we enter by the bronze doors of Bonanus, as most people do who do not enter the main door of the cathedral, we "size up" the transept columns in general by the dimensions of those that first strike the eye in their full height. The architect has put his best foot forward for a good first impression. His columns came from Sicily and were of irregular sizes, but it cannot be chance

that all the big ones are on the same side of the transept and that side the one facing its entrance door. Our surveying party worked over four weeks on the Pisa Cathedral without detecting this trick. I finally discovered it by pure accident. In plumbing the columns for the amount of their leans, I employed a man to carry a pole and was much surprised to find him stretching to reach the capitals on the west side of the transept. I then noticed the discrepancy of size in the lines of columns and took the measures, with the results specified.

It is quite likely that one discrepancy of such a character would be more speedily detected and quite certain that the multitude of these devices in the Pisa Cathedral so mystifies the eye that any given one is more likely to pass undetected.

A still more interesting case is that of the south wall at Troja (Fig. 8).

If the reader will examine this survey he will see that the arcades gradually increase in width from façade to transept, to the amount of two feet, while the pilasters gradually decrease in height in the same direction to the amount of two feet. The regularity of the variation in one given direction is such, in both cases, as to eliminate all suspicion of accident. Gentlemen who play poker are aware that a sequence of five cards does not often fall into their hands before they draw, and that it often fails them when they draw to it. Let them now consider the chances, after shuffling the ten spot cards together, of dealing them out in the regular order of number from one to ten, or in the regular order from ten to one. They will then be able to estimate the chances against accident in the *double* scheme of Troja.

From the standpoint of perspective, the effects are contradictory, but this very contradiction produces an effect of optical mystification and perplexity which must have been the result intended. This mystification is also contributory to an effect of dimension.

In this wall the plinth line is level

and the cornice of the aisle roof drops a foot towards the transept. Neither Mr. McKecknie nor I noticed the variations in arch dimension and height of the capitals until the measures had been taken.

A corresponding mystification is found on the side of the cathedral of Prato (Fig. 9). As at Troja the wall arcades gradually increase in size toward the transept, and the pilasters gradually decrease in height in the same direction. The arcade spacings are given in detail on the ground-plan of Prato Cathedral (Fig. 18 of the last Paper). A summary of the measures taken is as follows: The arcade spaces widen gradually from 9.33 to 12.34 (feet and decimals), a difference of three feet. (In the following measures for heights, the constants are omitted.) The arcades rise from 3.80 to 4.20, a difference of .40. The capitals drop from 1.20 to .85, a difference of .35. As at Troja, the arcade next the transept reverses the scheme. At Prato, the arcades containing the doors also break with the scheme of spacings. (It has been shown in my last Paper that both Troja and Prato have interior schemes bearing on the effect of the choir.)

I shall ultimately give a more careful account of the reasons for believing the subtleties in question to be of Byzantine derivation. At present I wish to point out that they are by no means universal, and if it were possible to consider any one of the given cases accidental, it would then devolve on the objector to explain why our survey has not found these subtleties in the Gothic of Northern Italy, why in the Italian Gothic of Tuscany they center in the buildings which are most nearly related to the Pisan Romanesque, why in the Romanesque period the phenomena are multiplied and well defined, according to the known historic facts regarding the centres of Byzantine culture in Italy, and why they appear to radiate from these Byzantine centres with weakening intensity according to the amount of distance and

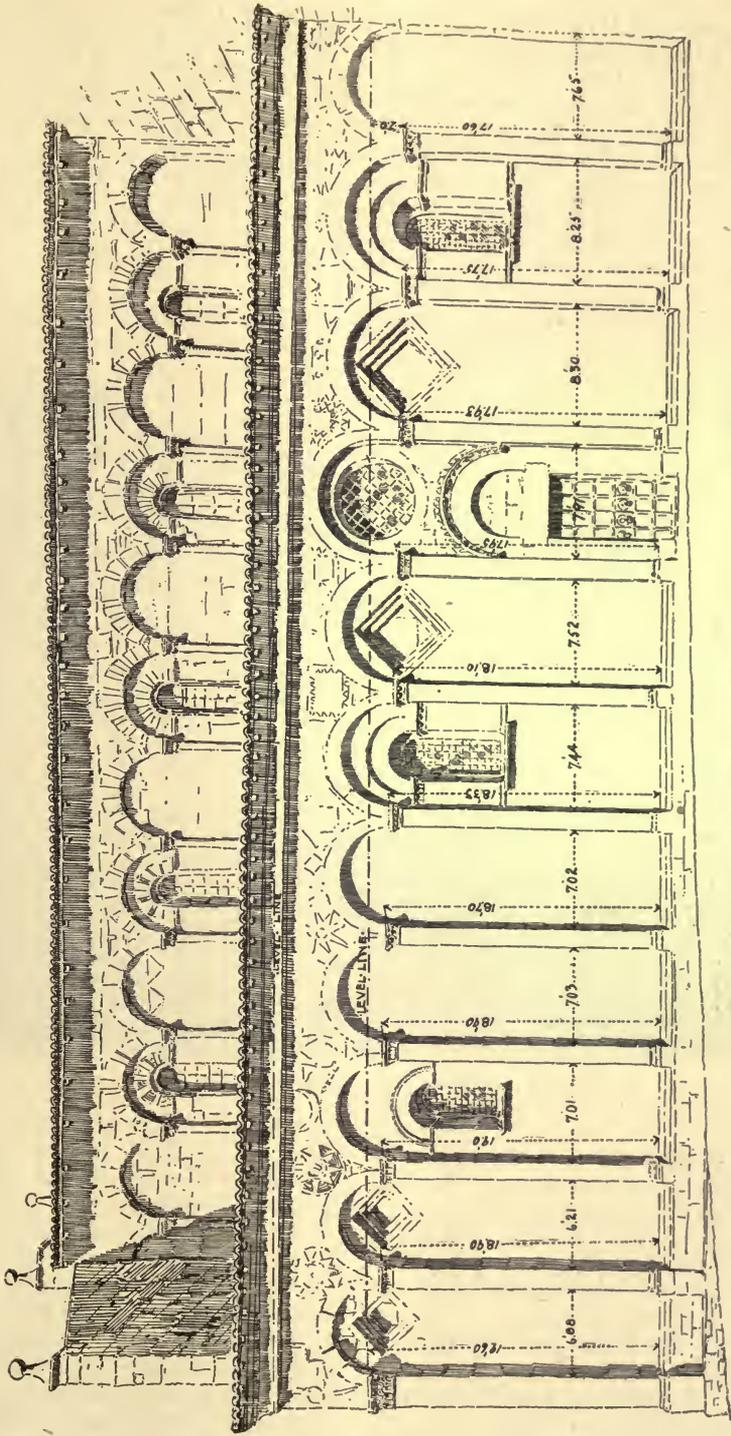


FIG. 8.—SURVEY OF THE SOUTH SIDE OF THE CATHEDRAL OF TROJA.

according to the Byzantine influence apparent in decorative details. It will also devolve on the objector to explain why in the Byzantine centres of Italian culture the phenomena are most numerous and best defined in the richer and important churches, and why they tend to disappear in the humbler and more rudely built churches, in which latter class acci-

teriors. A remarkable instance of this use is offered by the north side of S. Paolo Ripa d'Arno at Pisa (Fig. 10). The south side of this church is of rough masonry and unfinished as regards the casing.

In the direction from façade to transept the plinth drops 2.48 (feet and decimals), the earth's surface drops 1.01 and the arches rise 1.20, as meas-



Fig. 9.—SIDE OF THE CATHEDRAL OF PRATO.

dental irregularities would naturally be most common, according to the present prevailing prejudice.

It has been shown in the last Paper that obliquities in presumably horizontal lines of architectural members were employed in interiors for purposes of direct perspective effect in one given direction, but it appears from the instances at Prato and Troja that they were also employed as a means of optical mystification in ex-

ured to the plinth. This is an instance where settlement of the wall would probably be suggested by a hasty sceptic, but these measures show, if there has been such a settlement, that the arcades must have been originally 1.28 above level at the transept. The sceptic would then be obliged to account for an obliquity of the arcades and cornice above them, instead of accounting for an obliquity of the plinth.

Constructive obliquity being proven

for this case one cannot suggest any design excepting optical mystification. That such a mystification exists here is certain. The earth's surface, which really falls towards the transept, has the appearance from all points of view of rising toward the transept so distinctly that Mr. McKecknie took four successive levels and then concluded that his instrument had been damaged. My eyesight agreed with his in the matter so decidedly that we determined to obtain another instrument. We were much disturbed by our results because a number of previous surveys would have been vitiated by a damaged instrument. We could not say where or when the accident had occurred and we gave up work for the day with the belief that much of our labors in Italy might go for nothing. We accordingly went the next morning to an instrument dealer, deposited a hundred and fifty francs as security for a borrowed level, and returned to the church for another survey. After all this trouble it appeared that our own instrument had been accurate in the first instance. But the evidence of our eyesight continued to affirm what the evidence of the level denied. This instance does not prove that the mere illusion of a rising surface was the one especially sought, but the existence of this illusion is an illustration of the optical mystification which such a system of building produces. (The principle by which the falling surface appeared to rise, by contrast with the more pronounced fall of the plinth line, is familiar to experts in optics.)

In these various cases we find one controlling idea which takes us back to the round arch cornice of San Stefano at Pisa.* Every arrangement of like parts in unlike dimensions, or unlike relation, disturbs the point of view, puzzles the eye and throws the building into optical vibration—producing that effect of “life” which Mr. Ruskin has wonderfully described for a simpler class of phenomena in his “Lamp of

Life” in the “Seven Lamps of Architecture.”

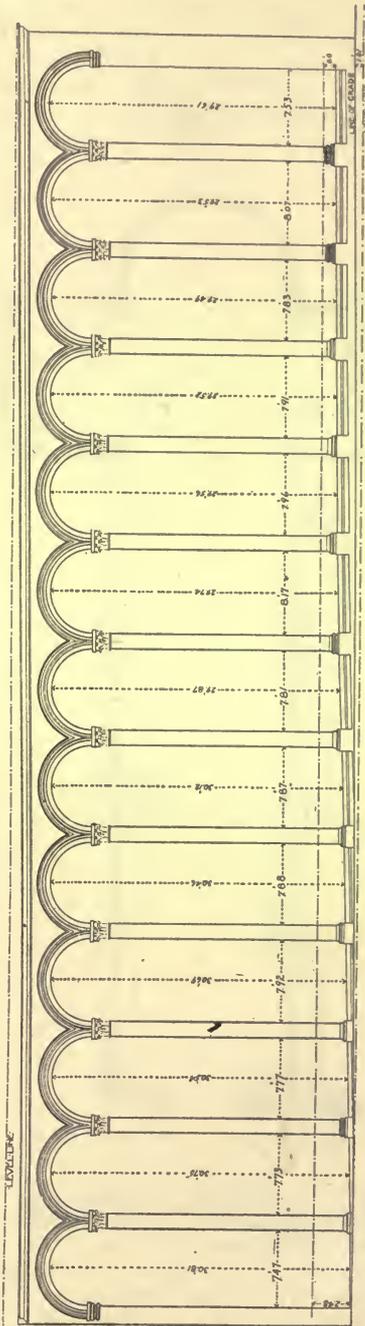


FIG. 10.—SURVEY OF THE NORTH WALL OF S. PAOLO RIPA D'ARNO, PISA.

The constructed obliquities of the Troja Cathedral, the Prato Cathedral

*See the October No., pp. 164, 165, and Fig. 3.

and S. Paolo Ripa d'Arno at Pisa, suggest a reconsideration of the effects of the sloping string-courses of the Pisa Cathedral (matter of my last Paper). The effects are by no means confined to that of direct perspective which has been so far indicated. There is mystification from every point

tape; and one could fix the centre in any building which has a horizontal string-course without the slightest difficulty, by selecting the point opposite to which the string-course appears to be horizontal.

The mysteries of the south wall are not yet exhausted, for it has also a pronounced curve in plan, to be illustrated in my next Paper.

The foregoing are a few facts chosen from a multitude brought out by the survey of 1895. When fairly viewed they prove that optical mystification, as distinct from a direct increase of magnitude, was intended by some of the irregularities of Italian medieval building. Some of the most important phenomena of this class have yet to be described.

In the ground-plans of Italian churches there are deviations from regularity which undoubtedly contribute to an effect of the picturesque. The proofs of intentional construction are of various kinds. We have, for instance, surveyed a series of cases in which the walls are oblique to the façade in one and the same direction. Among the most remarkable instances surveyed are S. Chiara at Assisi (Fig. 11), S. Nicola at Bari (Fig. 12), the cathedrals at Ruvo (Fig. 13) and Troja (Fig. 21), S. Bartolomeo at Rome (Fig. 14), the basilica of Castel St. Elia near Nepi, the Church of S. Giovanni in Zoccoli at Viterbo (Fig. 15), the Church of S. Maria della Pieve at Arezzo (Fig. 9 in Vol. VI., No. 1), the cathedrals of Orvieto (Fig. 16), Piacenza and Cremona (Fig. 17), and the churches of Toscanella (Figs. 1 and 18), etc. Some of these churches have one wall longer than the other. The Cathedral of Orvieto is twelve feet longer on the north side, the Church of S. Giovanni in Zoccoli at Viterbo is six feet longer on one side than on the other.

Let us first take a proof of intention from S. Chiara at Assisi (Fig. 11). Both walls are oblique in one direction; the widths of the church are identical to the hundredth part of a foot at the façade

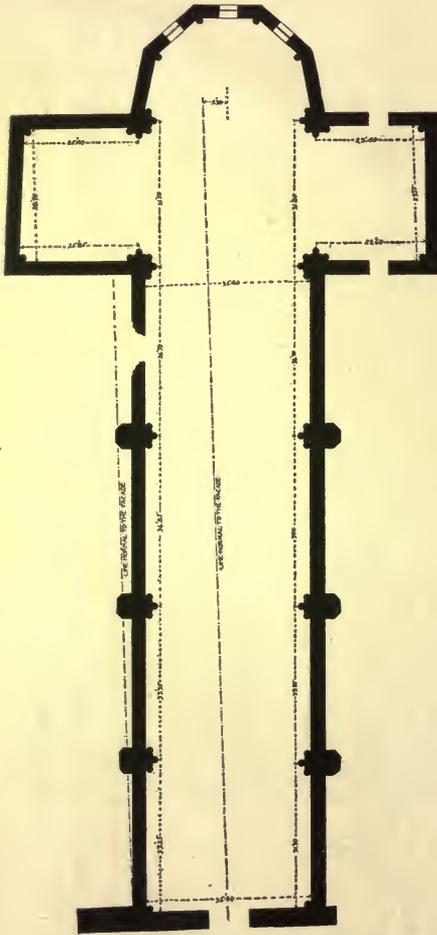


Fig. 11.—PLAN OF S. CHIARA, ASSISI.

of view. If we stand opposite the centre of the south wall, one effect, that argued by the eye from the distances to the ends of the wall, is the effect of a centre view, but another effect, produced by the string-course, is that of being on the left of the centre. I will defy any one to fix the centre of the south wall at Pisa without a measuring

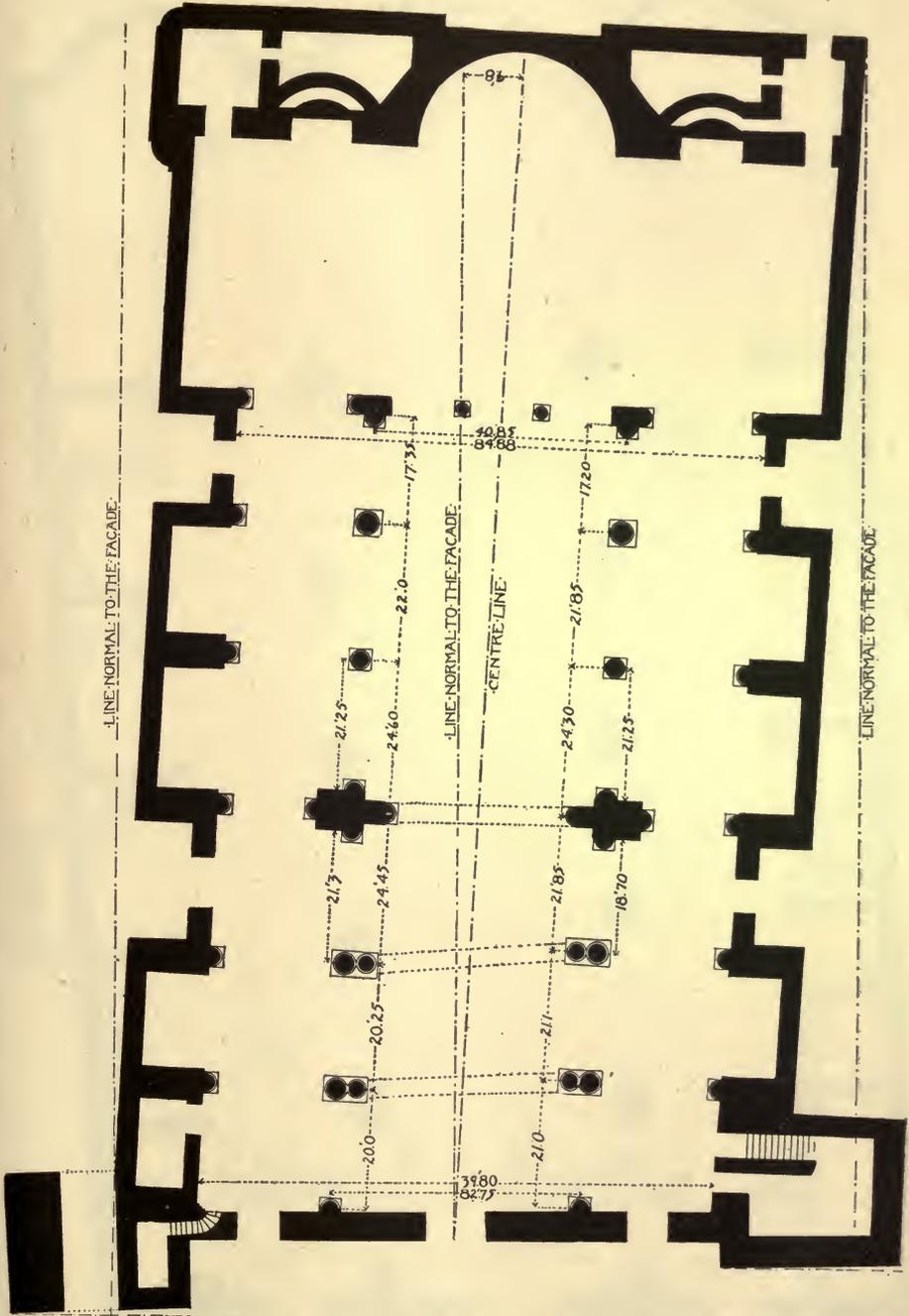


Fig. 12.—PLAN OF S. NICOLA, BARI.

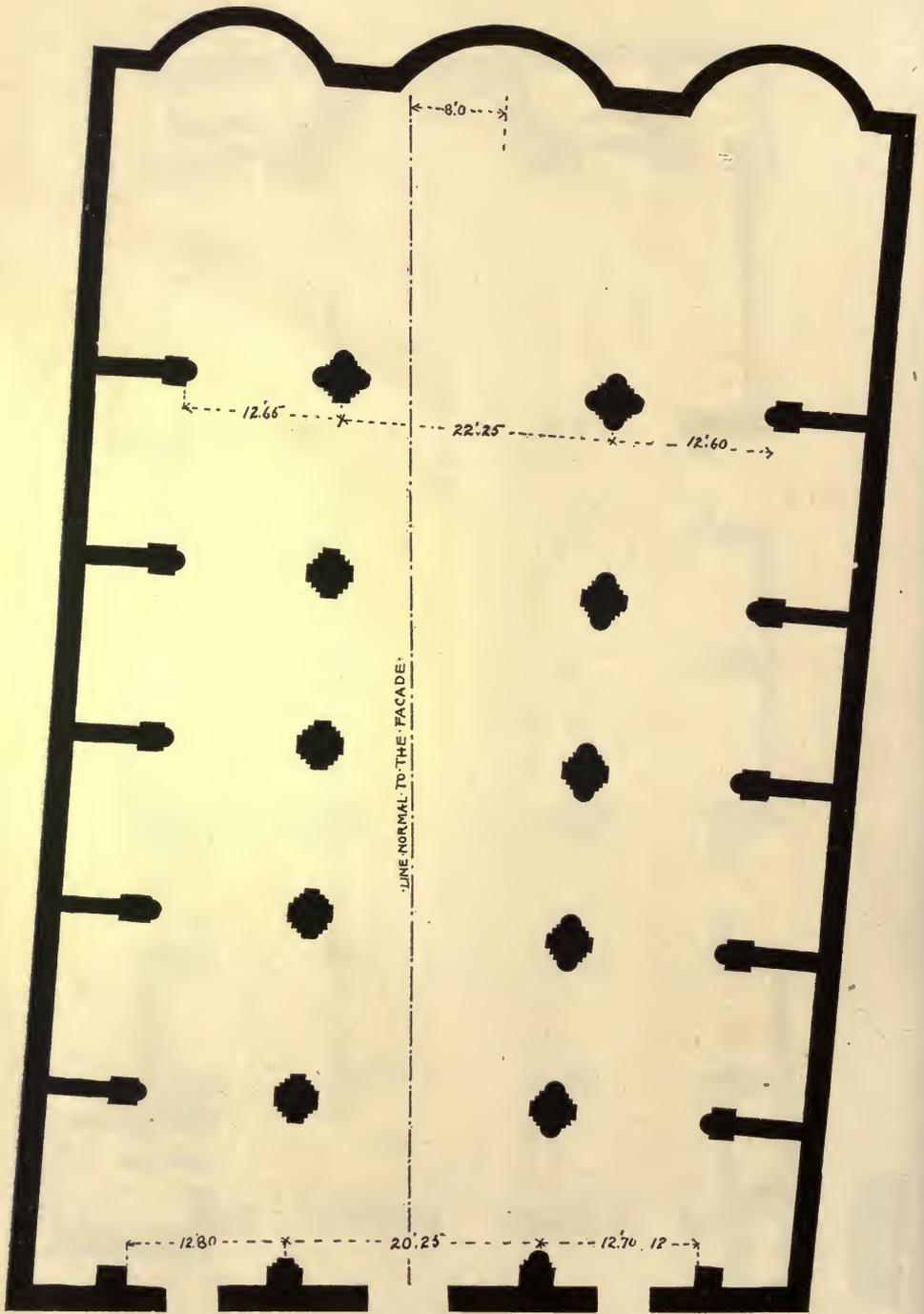


Fig. 13.—PLAN OF THE CATHEDRAL OF RUVO.

and at the transept. In other words, the walls are exactly parallel in a deflection amounting to 5.30 for the length of the church. Can any one believe that these two walls are accidentally parallel?

At Orvieto, we have a proof of intention as to the irregular length of walls, which is obtained from the laying out of the piers of the nave (Fig. 15). After the entrance bay, for which the measures tally on both sides, each pier spacing on the left is longer than the corresponding one on the right. In the laying out of the nave the left side is therefore 2.35 longer than the right. This is obtained by a series of increments of which the lowest is 2-10 of a foot. This establishes two points—first, that the irregular length of the walls is intended; because it is related to an intentionally constructed and corresponding irregular length of the lines of piers in the nave; second, that the limit of error due to carelessness at Orvieto is *under* 2-10 of a foot. The measurements are found on our plan and are also given here:

Left, 32.0; 31.70; 32.45; 31.90; 31.40.

Right, 32.0; 31.40; 31.40; 31.70; 31.20.

We have another means of proving the obliquity of plan at Orvieto to be intended, because an obliquity of line is found in the projecting chapels of the left wall, which are built gradually shallower in the direction of the transept. The whole variation is one of about two feet, and it is produced by a graded series of minor deviations. As the chapels grow shallower, they also grow gradually wider. This scheme is broken at the chapel next the transept (Fig. 16).

For the Church of S. Giovanni in Zoccoli at Viterbo we have already illustrated the rising pavement (Fig. 24 of my last Paper). We turn now to the ground-plan (Fig. 15). The centre of the nave is deflected 4.90 from the normal line and the walls of the church are oblique to the façade in one direction. The left wall is 6.68 longer than

the right wall. To show that this is not accidental we have only to examine the pier spacings of the nave. With exception of the bays next the entrance, where the discrepancy is only 22-100 of a foot in the other direction, every bay on the left is laid out in a larger dimension than the one on the right. This proves that the extra length of the left wall and the consequent obliquity of the wall of the apse, as compared with the façade, belong to the original plan of the church.

Our plan of S. Maria at Toscanella (Fig. 18) also contains internal proof of purpose as regards the unequal length of the walls. The left wall is 4 ft. the longer. Let us now compare the related measures for the intercolumniations of the nave. As found in the plan the measures run:

Left, 15.90; 15.80; 14.10; 13.80; 13.85.

Right, 14.50; 15.50; 13.85; 13.80; 13.80.

It thus appears that an extra length of 4 ft. in the left wall was connected with an increment of spacings on the left side of the nave ranging from .05 to .60. The measures for the choir show an increment of .90 on the left. (Students of this plan are warned that a comparison of the measurements for the wall arcades is complicated by the fact that there are eight on the left wall and seven on the right wall.)

For the question of intention in obliquities of interior plan the survey of S. Pietro at Assisi is instructive. For a section of this church showing a drop in the arches of 2.60 and a rise in the pavement of 1.70, see Fig. 7, Vol. VI., No. 1, of *The Architectural Record*. See also the photograph of this issue (Fig. 19). We will now consider the ground-plan (Fig. 20). The nave pier spacings are as follows:

Left, 18.50; 18.90; 17.80.

Right, 18.30; 19.0; 17.80.

Thus the first pair of arches are equal within 2-10 of a foot; the second pair are equal within 1-10 of a foot; the third pair are equal exactly. We therefore have the proof that the build-

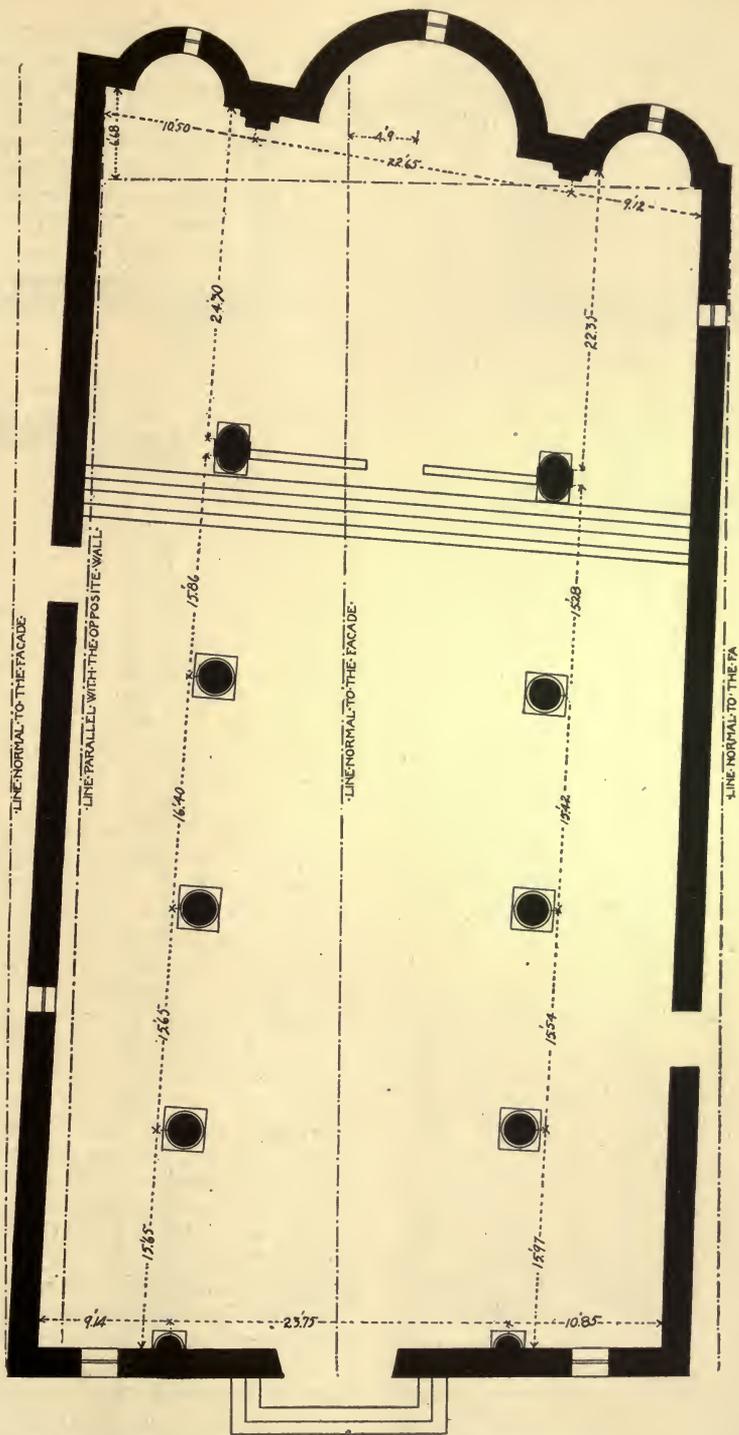


Fig. 15.—PLAN OF S. GIOVANNI IN ZOCCOLI, VITERBO.

ers knew what they were doing within 2-10 of a foot, and that they purposely made the second bay longer than the first, and the third bay shorter than the second. This appears because the variations are the same on both sides of the nave, within 2-10 of a foot. Now for the obliquity of lines in the choir. Before we reach the choir the left aisle shows measures at the two ends which correspond within 1-10 of a foot. The measures for the nave tally exactly at its two extremities. It does not therefore appear to be carelessness which causes the right aisle to be 1.85 narrower than its fellow at the entrance and 1.10 narrower than its fellow at the rise of the steps. If the builder could make the widths of his nave tally exactly as far as the rise of the steps, he probably knew what he was doing when he first widened it 1.60 and then contracted it 1.10 beyond that point.

All of the Italian ground-plans which have oblique exterior walls have interior obliquities in the lines of nave and aisles. In most cases there is a slight spread in the lines of the nave and a slight convergence of the lines of the aisles in the direction toward the choir. The purpose seems to have been an avoidance of mathematically parallel lines, with a view to an increase of picturesque effect.

From the standpoint of purely perspective effect there are contradictory appearances in all uses of converging lines in plan, and this is probably why the convergence of church walls toward the choir had no wide application. (About six cases are known to me in Italy, see last Paper.) If the lines of a nave converge in plan toward the choir and the arches do not drop correspondingly, the effect of the arches contradicts that of the lines in plan. If both devices are employed at once, detection of the trick is generally easy. (I do not know of any medieval Italian church in which both schemes were employed, but it was the method of Bernini in the Scala Regia of the Vatican.) On the other hand, if the

lines of the nave diverge to the choir there is an increase of perspective effect as regards the lines of arches, which are thrown into more pronounced appearance of recession, although the lines in plan contradict the natural effect of perspective. Mystification of the eye, as distinct from direct increment of dimension, seems to have been the purpose of most cases of constructed asymmetry in the plans of Italian churches.

To continue the argument concerning constructive purpose of the oblique plans, we note the following as so far dealt with successfully: S. Chiara, Assisi; the Cathedral of Orvieto, Church of S. Giovanni in Zoccoli at Viterbo, Church of S. Maria at Toscanella. We may now add S. Pietro at Toscanella (Fig. 1) on the ground of the evidence for design in the pier spacing (p. 377). It is also impossible that the lines of the façade of this church should have been bent in plan by accident. This symmetrical bend in plan of the façade belongs to a class of facts to be considered in the next issue.

An impregnable case of constructive asymmetry is offered by the plan of S. Nicola at Bari. The side walls are broken by recesses for side entrances at two points on each side (Fig. 12) and yet the continuity of the obliquity is unbroken in the main exterior lines. Incredulity as to constructive purpose, in face of this plan, is either the result of stupidity or of wilful indifference.

For all the cases of the oblique plans taken collectively it is a point that our survey has found no churches in which both walls make an obtuse angle with the façade. The fact that the walls are always oblique in one direction is a strong argument in favor of design. Explanations based on local causes are out of the question, in view of the number of examples (about thirty-five cases), and this possibility has, moreover, always received careful attention from our survey in face of the monuments, but without finding anything in its

which does not keep inside the limit of conspicuous irregularity. There is again here an argument against the supposition that pure indifference to symmetry is the cause. If this indifference were the cause we could not explain why this limitation of the inconspicuous is preserved. In the buildings, one simply has a picturesque result. You think yourself at the side

has an oblique plan, but so inconspicuously that I have no survey for the fact, for I only noticed it on the last day that I had to spend in Pisa, having given five weeks to its buildings and having been in this church five times for measures and photographs. We had an amusing experience at Castel St. Elia (near Nepi and south of Viterbo), where the church is deflected



Fig. 19.—S. PIETRO, ASSISI.

Compare Fig. 20. Photograph in parallel perspective, showing the rising pavement and drop in arches in the direction of the choir. Compare the section, Fig. 7, Vol. VI, No. 1.

of the church when at the centre, or *vice versa*. Your point of view is changed or confused or doubled, but you are not aware of anything irregular until the measures are taken. At Ruvo, where the deflection is eight feet, Mr. McKecknie asked me what I had brought him to survey, when I first took him inside the church (Fig. 13). The little Church of S. Stefano at Pisa

8½ feet in 80 feet, the walls being parallel. It is a pilgrimage church in an out of the way locality, which is in charge of a very intelligent German sacristan, a lay brother, who has been delegated by his Order at Rome for this work, and who takes great interest in the building. He had much to show us, but was beside himself with surprise and interest when I showed him

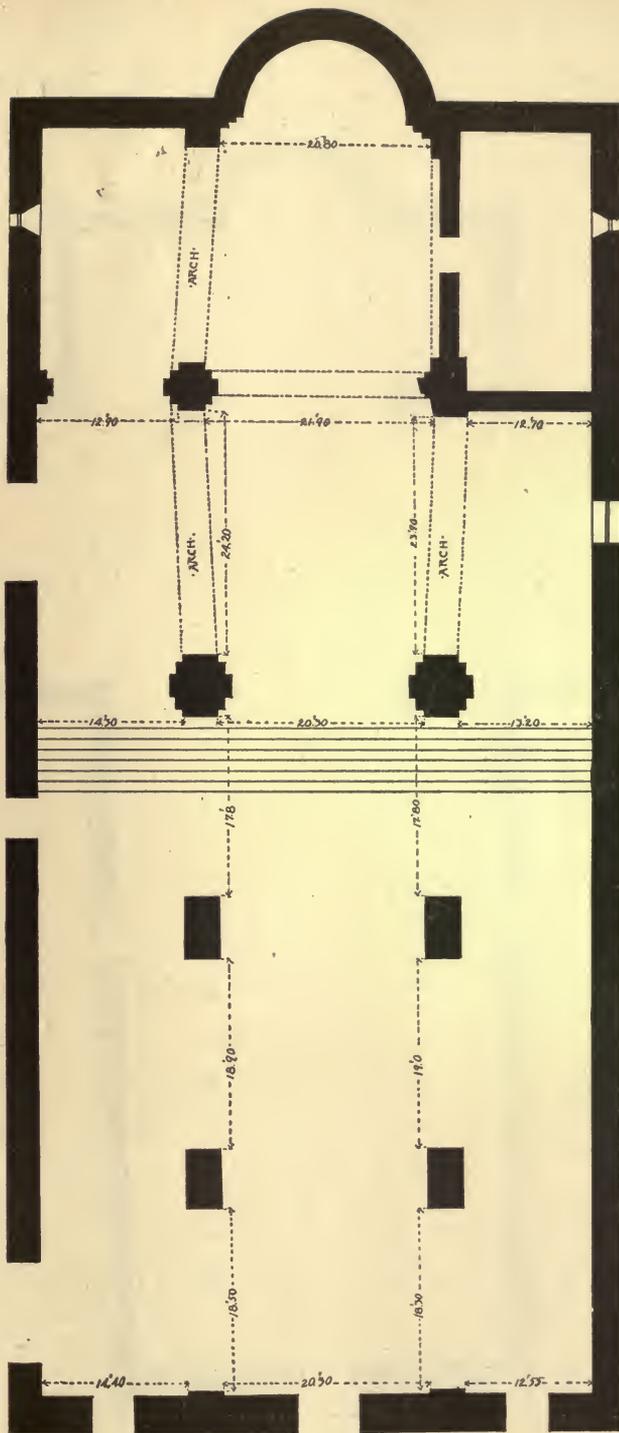


Fig. 20.—PLAN OF S. PIETRO, ASSISI.
Compare Fig. 19.

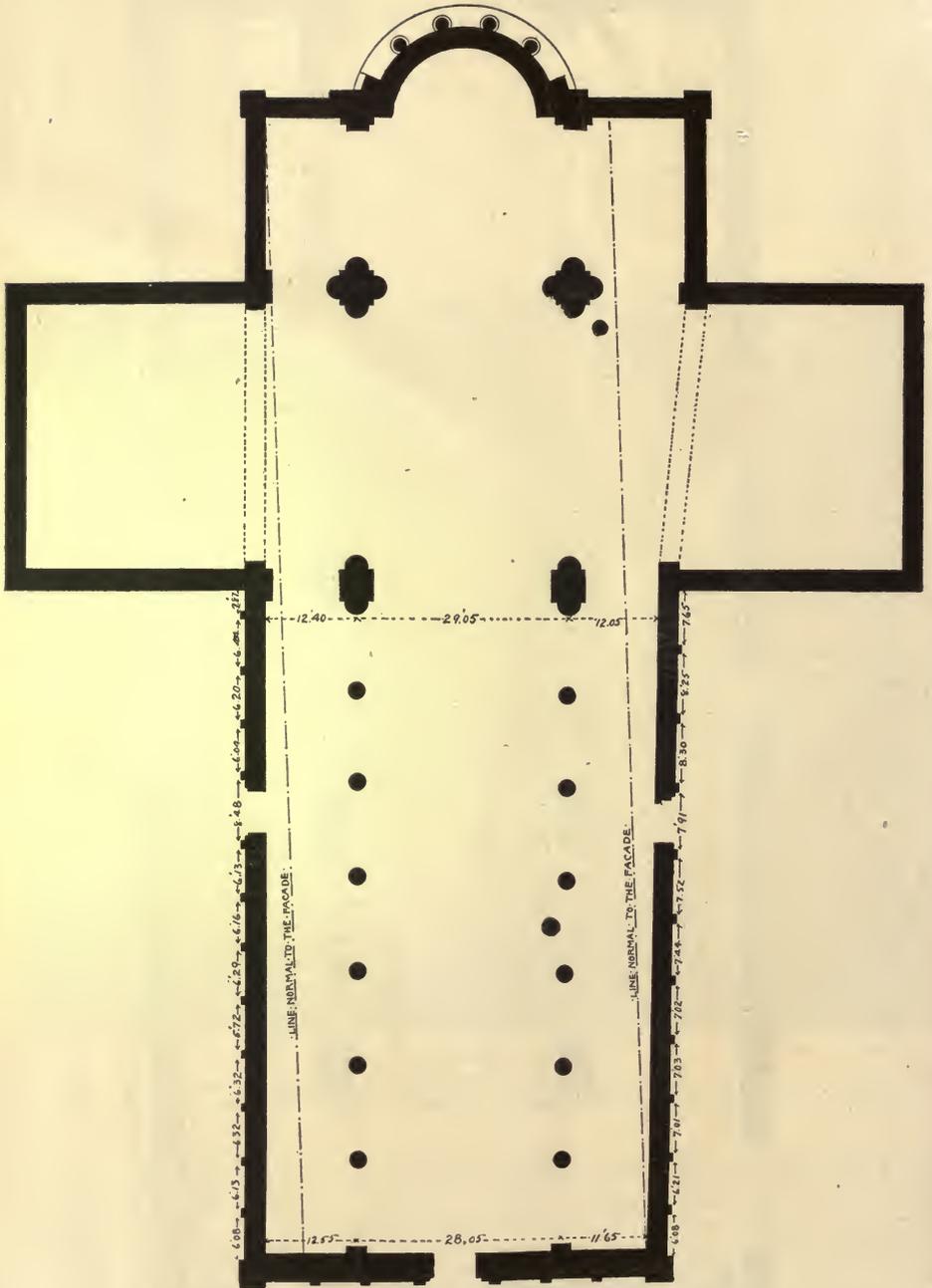


Fig. 21.—PLAN OF THE CATHEDRAL OF TROJA
Compare Fig. 8.

the obliquity of plan. He had never seen it before, and remarked that about fifty students had visited the church during his charge of it, to make sketches and observations, but that no one had ever taken notice of this construction. The sacristan at Piacenza is, however, well aware of the peculiarity of this cathedral, and believes it to be due to an earthquake.

Our party had no notion that one wall of San Giovanni in Zoccoli at Viterbo is six feet longer than the other until the measures were taken. Neither did we know that one wall at Orvieto is twelve feet longer than the other until the survey proved it.

There are no counterparts known to me in publication of such oblique plans as we have surveyed at Bari, Ruvo, Troja, Castel St. Elia, Viterbo, Toscanella, Assisi, Arezzo and Orvieto. Cremona and Piacenza approach more nearly to some plans known to me in Northern Europe. There are published plans of Bari, Ruvo and Troja; but they are incorrect. Besides the churches above named as carefully surveyed in 1895, I have made personal observation of similar churches at Andria (near Barletta), Bitetto (near Bari), Nepi, Narni, Spoleto, Perugia, Montefalco (near Foligno) and Montefiascone (near Viterbo).

We are dealing herewith facts which bring us face to face with the problem of the deflected plans of North European cathedrals; deflected, that is, as regards the choir, but not oblique as to the façade. Many cathedrals of Northern Europe have a deflected choir. Regarding the churches of France and England, it is fashionable to speak of this eccentricity as representing the bending of the head of Christ on the Cross. It has been proven that there is no literary author-

ity for the supposed tradition.* I have not found any trace of this tradition in Italy. It may be that this supposed tradition is either a suggestion of some modern sentimentalist, which has spread from one point to another, or else that it was an afterthought of the Middle Ages, which had lost sight in some places of its own original motive in deflecting these plans. Another possibility would be that some medieval master-mason, or guild of masons, had found this suggestion more attractive to the clergy than the true artistic reason. How should we, at all events, explain those oblique Italian churches which have no transept and no cross form, as representing the bending of Christ's head on the Cross? What suggestion shall we make, on the basis of such a theory, for the churches whose walls are oblique to the façade but whose plans show no bend? But these plans grade in two directions. On the one side they grade over to plans with the deflected choir. On the other side they grade into plans in which the lines of the nave are curved, but which have no exterior deflection or obliquity.

The Cathedral of Fiesole (ground-plan in the next issue) will serve as a type of a church having a rectangular plan, whose clerestory walls and pier lines are built in parallel curves. In this church and in other similar ones, we have no transept and no cross-form. Symbolism is at fault here, and constructive purpose cannot be denied for curves which begin in the foundations of the building. I shall therefore move to the consideration of curves in medieval Italian churches by way of the curves in the plans of the naves, to be first illustrated from Fiesole, Ravenna, Toscanella, Siena, and Pisa.

*See a discussion of this subject by many competent authorities in "Notes and Queries," Second Series, Vols. X. and XI.

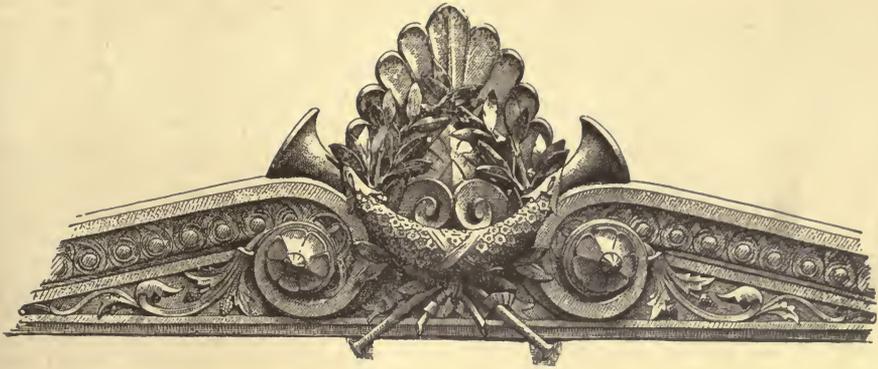
Wm. H. Goodyear.

(To be Continued.)



Annapolis, Md.

OGLE HOUSE,



NEW BOOKS.

EUROPEAN ARCHITECTURE: A HISTORICAL STUDY. By Russell Sturgis, A. M., Ph. D., F. A. I. A., President of the Fine Arts Federation of New York, Past President of the Architectural League of New York, Vice-President of the National Sculpture Society, Honorary Member of the Mural Painters, &c. New York: The Macmillan Company. London: Macmillan & Co.

Of late there has been a noticeable addition to English architectural literature. Let us be thankful, the addition, in the main, has been to the very class of works wherein our literature has been remarkably deficient. The French student of architecture, and the German student, have had at hand for years an abundant elementary library, whereas the Anglo-Saxon, confined to his proper tongue, has been very poorly provided. It is much to be able to say that this deficiency, in its grosser respects, exists no longer. Of handbooks, compendiums and the like, intended for the class-room and the general reader, there have appeared quite recently Hamlin's "History of Architecture," Statham's "Architecture for General Readers," Fletcher's "History of Architecture," Goodyear's "Roman and Mediaeval Art," "Modern Art," Mathews' "Story of Architecture," Russell Sturgis' "European Architecture," in addition to numerous translations, special studies, and "picture books," of which Mrs. Van Rensselaer's "English Cathedrals" is an example. This is only a partial list, but if we may take for granted that publishers know their market, it is long enough to warrant the supposition that the public is giving somewhat more attention to-day than in the past to the art it is perhaps more ignorant of than any other of all the fine arts. However, the quantitative aspect of this bookmaking

is not the most deserving of attention. Already too large a part of our literature dealing with art is pure vexation. There is, indeed, some analogy between books upon art and books upon the manners and customs of people—authorship is rarely assumed by the really competent, the artist, the native-born. Perhaps this is so because all that is so highly interesting to the outsider, the foreigner, in proportion to its novelty, presents to the indigine no external aspect, and in that respect is really foreign to his consideration in proportion to its familiarity. We all know how much of his subject even the "intelligent foreigner" misses or perverts, and in art the alien view goes scarcely closer to the centre. Moreover, art is not a subject that itself imposes rigorously upon an author unavoidable qualifications. With Science or History, for instance, a writer must perforce work from recognized, established bases; or at least he must, at the outset, square himself with a body of well-defined knowledge, which is, in itself, an intensely critical force. Little of the kind guards the Fine Arts against unfortunate intrusion. It is the province of letters wherein the writer has least the sense of convincing police regulations.

The foregoing brings us to our immediate object—Mr. Sturgis' new book. It is not only one of a number of works put lately into the hands of the public, a serious attempt to interest people in architecture, but it is particularly notable as being a book by an architect, and an architect of solid attainments, who has been a life-long practitioner of his art. The writer, moreover, is an American, and the thought must have occurred to many that if ever we obtain in English a really sufficient history of architecture, most probably it will

be written by an American. One could not expect it from an Englishman—though this is not the British opinion. The Englishman's native predilections are naturally too strong, except under extraordinary circumstances, to permit that complete detachment from traditional and innate bias essential to an impartial and nicely balanced treatment of an art wherein so many diverse moods and ideals have found expression. Indeed, is it not in this very matter of unconscious detachment from national prepossessions that the German, with all his knowledge, and the Frenchman, with all his critical tact and lucidity, fall somewhat when they have to deal with really alien types of artistic creation? It is here that the American is peculiarly and fortunately free. He is supremely independent of any national or traditional attachments for any architectural style or phase of style. The very circumstances that have made the practice of architecture in the United States so raw, unfixed, eclectic, form for the American historian and critic a species of natural endowment of a high order. What we have lacked hitherto for performance has been interested scholarship, and here, again, Mr. Sturgis' work arouses our expectations, for the author's scholarly knowledge of his subject is beyond question. What, then, is the result?

The title of the book implies limitations that are more than geographical. A general history of architecture that begins elsewhere than at the beginning must exclude a thorough-going scientific treatment of the subject. Yet, let us admit, at once, the very last thing a really scientific treatment would hazard with our present knowledge is a single definite word about origins. The debt of Greece to Egypt, or Mesopotamia may be admitted. Nevertheless, so much is pure conjecture that the safest course is to say the least about the matter. Therefore, in a book intended for general readers Mr. Sturgis is right in ignoring the subject. For such, European architecture begins in Europe. We refer to the restriction solely because an author's choice of his own ground is a matter of significance. It usually indicates broadly his personal way of thinking and shows us the bent of his speculation. In Mr. Sturgis' case we have indicated for us at the outset a scholarly caution and an instinctive distaste for all that is tenuous and unsettled, which are among the admirable qualities of this work. This judicious reticence impresses itself upon the reader more and more as he proceeds from chapter to chapter, until he perceives that he has been kept with unusual rigor to a certain order of facts—the concrete facts. This building or that is

perpetually in sight. The study is, he observes, as it were, conducted always on the spot. The subject before him is ever a matter of masonry, a method of construction, a circumstance of decoration—but the last very much more rarely than the others. The eye, indeed, is held so close to the facts of structure—to column, pediment, vault and buttress—that one catches scarcely a glimpse of the building free-standing as an artistic whole, in the open air, against the sky, with its historical surroundings. No; it is the anatomy of the styles that we are mainly directed to study, those elements of a building that can be dated exactly, accurately measured and correctly computed. This is the physiology of architecture. "Wherein does Gothic architecture differ from Romanesque architecture, and what are the causes of the difference? *These causes are to seek in a minute comparison of the works of the Gothic and the Romanesque builders.*" The italics in this quotation from the preface are ours. These sentences are the keynote of the entire book. It is impossible to be more cautious, to hazard less. The mental element, the temperamental qualities revealed in the artistic productions of a period are eliminated from consideration. A building, a style, is isolated from the civilization of which it is an expression. Yet, some, we are sure, will affirm that it is in a given civilization that are to be found the chief constituents of a given style. There we must seek the fundamental difference between—to keep to Mr. Sturgis' example—Romanesque architecture and Gothic architecture. To search for the causes of that difference "in a minute comparison of the works of the Gothic and the Romanesque builders" is to make cause and effect synonymous and confound the product with what produced it. Moreover, if a mechanical principle, as that involved in Gothic vaulting, be the centre of a style, does not that view, in appearance at least, separate architecture from the other arts and from all the other circumstances of the period? If the Gothic style is essentially a certain system of construction, how are we to bring it into relationship with the stained glass, the stone carving, the iron-work which adorn that system of construction? Surely the chants that arose in the cathedrals of the thirteenth century, the very vestments of the priests, the furniture of the altars, the phraseology of the litanies and prayers were innately akin to the structures that were their proper setting. Their common denominator was the chief factor of the Gothic style, and that common denominator was the spirit of the age.

Mr. Sturgis, however, declares that enquiries in these directions are "rather for the scientifically inclined than for those to whom decorative art is the chief matter. For these last, the analysis and criticism of their beloved art itself is quite enough." Undoubtedly, this is exactly the architect's view; and if we turn to the architect for our history of architecture we must be prepared to accept it with large limitations, finding compensation for what is missing, as no doubt we shall find compensation, in the treatment of purely artistic questions.

Needless to say, we have no quarrel with the position Mr. Sturgis takes. We have no right to insist that he ought to be interested in other matters besides the "analysis and criticism" of his art. He is not; he says so. True, this position limits the scope of his work. But that acknowledged, the questions are: Is the work, as done, worth doing; and, is it well done? The answer to the first is obvious. It is what we need in English before all else. Regarding the performance likewise there can be no possible doubt.

It is admirable throughout in the highest degree. We have no other book comparable with it; none that is quite so substantial. In thought, matter and style the volume is remarkable. It is the ripe product of high scholarship, and we are sure that every lover of architecture will close his reading of the book with the sense of pleasure one obtains from all thoroughly excellent achievements. And how delightful the reading itself is. A certain compactness of treatment is a marked characteristic of the work. The compression, however, is obtained without dryness or obscurity; on the contrary, it is accompanied by a notable minuteness of qualification and a fine interjection of detail that deserve particular attention. The following extract is a good example of the qualities we have spoken of:

When, therefore, men's minds were turned toward a revival of classical learning, as they were more and more, continually, during the years following 1400, there were found some among the younger students of building and engineering who were eager to study the Roman monuments thoroughly, and with a view to working in the same style. * * * *

Among these young men was Filippo di Ser Brunellesco, an able sculptor in 1401, and one of those who, in that year, had competed in the matter of the third pair of doors for the Florentine Baptistry. When Ghiberti had been successful in this competition, Brunellesco went to Rome to study ancient buildings. Returning to Florence at some time before 1415, he proposed to finish the cathedral by roofing the great octagon (see Fig. 166 B), not as it had been contemplated, but in a more classical taste.

About 1420 work upon this began under his directions, and the present cupola was the result. This is one of the greatest achievements in architectural art. The cupola of the Pantheon at Rome, the largest one known, and obviously Brunellesco's chief inspiration, is circular, is supported by a massive circular wall, and is kept in place by enormous masses of masonry piled upon its haunches. The dome of the so-called temple of Minerva Medica is much smaller, and this, and all other Roman domes which Brunellesco could have studied, are of a massiveness which he did not try to rival. We have no reason to suppose that he studied H. Sophia of Constantinople, or other Byzantine examples, and no cupolas properly so called had been built in Western Europe during the Middle Ages. Brunellesco's work was a marvel of invention and boldness, for his dome, only two feet less in diameter than that of the Pantheon, is light and lofty, octagonal instead of round, and raised upon a high octagonal drum, which rests upon open arches. This cupola was calculated, also, to support a terminal structure, which, built after Brunellesco's death, is in itself a masonry building eighty feet high. Later architects, working in the same direction, have found it very difficult to make a bulging shell of masonry support such a lantern. This astonishing feat must have given Brunellesco supremacy among the builders of the day, but it does not show any marked preference for Roman forms. He had gained inspiration from them in the right way, and in the right way had designed and built an original work.

In the Pazzi chapel, adjoining the church of S. Croce, in Florence, the Roman details appeared, probably, for the first time (see Fig. 192). The vaulting here is Roman in principle; that is to say, it is built as a single arched shell without ribs; but such vaulting was a commonplace of Italian buildings, and was free to any one to use; the Roman imitation appears in the decoration of the surface of the vault by coffering in the columns with Corinthian capitals, the elaborate system of Corinthian pilasters large and small, and the frieze decorated with the strigil ornament copied from some antique sarcophagus. This is the beginning of modern imitative architecture. It is, moreover, the only building, as it appears, in which Brunellesco tried to use Roman forms as the Romans had used them. Had the church S. Maria degli Angeli in Florence been completed, the Roman experiment would have been tried more thoroughly in it, but this has remained a fragment. In the Church of S. Lorenzo, built during Brunellesco's life, and that of S. Spirito, built after his death, from his plans, both in Florence, the Roman column is used, and a semblance of the Roman entablature serves as a kind of larger abacus or second capital, but the arches spring directly from the columns in a fashion not identified with the true official Roman style of the second century (see Ch. II), and the entablature is so slight and small as to contradict Roman proportions altogether. Finally, in the front of the palace Pazzi-Quaratesi, there is nothing that an architect of the Roman Empire could have used. This is a palace-front of the type familiar to us, with pointed arches and arcaded

cornices, in the narrow streets of the Tuscan town, but with the details changed.

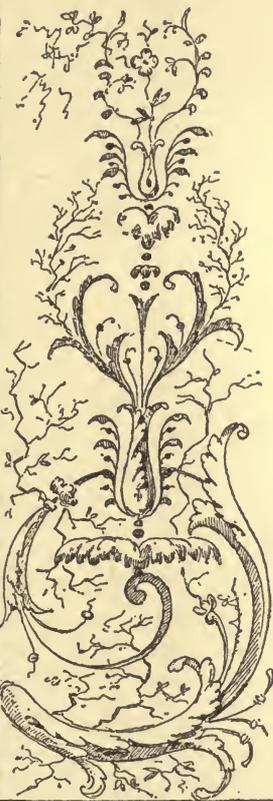
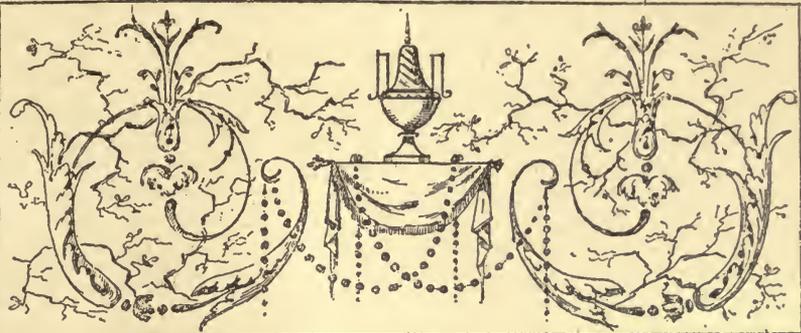
The buildings above-named are all in Florence, and their dates are not so widely separated that they need be distinguished as marking eras in Brunellesco's life. They were all built within twenty-four years; except S. Spirito, as above stated. With these was built the beautified Loggia of the Foundling Hospital (Spedale degli Innocenti), and that of S. Paolo, the first undoubtedly, the second possibly, by Brunellesco; buildings altogether mediaeval in form, except that the mouldings have been made to conform to classic types, and that the columns have a partly classical air.

In this manner the history of the European styles is told. The period covered is about twenty-four hundred years, that is, from 600 B. C. to the end of the eighteenth century. The number of buildings referred to is large, for very few of the 500 pages are given to general considerations or to broad sketches of the chief characteristics of the styles. As we have said, the author's plan is to proceed from one edifice to another, analyzing construction and decoration, with, of course, in later periods, some attention to the architects whose works are considered. Mr. Sturgis' appreciation is catholic, or perhaps we ought to say it is thoroughly impartial. In only one place has he allowed himself what may be strictly termed an expression of personal preference; we refer to the close of the chapter on the Byzantine style. Regarding the value of modern architecture he is thoroughly sceptical. He denies that architecture is even alive to-day as a fine art, and

his remarks apropos of present conditions (p. 542) are not only well stated, but deserve to be pondered by those who are seeking a way out of the present wilderness of dead classicism and endless copying. The judgment shown throughout the book is eminently sane, so sound, indeed, that we are startled by the strong admiration expressed for the Caryatide porch, or Southern portico of the Erechtheon. This piece of work, beautiful as the sculpture undoubtedly is, must surely be regarded as the notable solecism in Greek architecture of the prime. It was a regrettable misdirection of artistic effort. Few, we think, will join Mr. Sturgis in his wish that we had more of it.

The book is illustrated with 266 drawings and reproductions of photographs. The selection of subjects has been made with care to enlighten the text, and not, as is often the case, for mere pictorial effect. It is a pity, however, that the half-tone process was not more frequently used for exterior views of buildings. Some of the borrowed illustrations have suffered from over-reduction. These, however, are slight defects. They do not impair the immense usefulness of the work, which deserves to be studied and restudied by all who wish to familiarize themselves with the monuments of European architecture. This is now the best text-book we have in English, and, with a good collection of photographs, is an equipment for thorough and delightful study.

H. W. D.



Technical Department



ART WORK IN IRON.

THE ancients were remarkable for the character of their hand-wrought implements of warfare, their household utensils and their ornaments. It has been reserved to the iron worker of to-day to produce objects of art out of the metal in mass, and to weld it into forms of utility for structural adornment and construction. The architects of even so recent a period as a quarter-of-a-century ago little dreamed of the uses to which iron was so soon to be adapted, not only by mould, but by the skill of man's hand and arm. The magnificence of our modern structures, and the often boundless freedom given to the architect to produce good work, has enabled that creator of noble buildings to design the most delicate and also the most striking objects in both metal and stone. To what extent the former is used in these great constructions is shown in one of the most recent examples of architecture—the Manhattan Hotel, on the northwest corner of Madison Avenue and Forty-second Street, New York City. Architect Hardenbergh has been most successful in his treatment of the iron work in this noble structure, and his designs have been carried out by the JACKSON ARCHITECTURAL IRON WORKS, a firm that has acquired national repute for this class of work, in which it stands in the very front of its competitors. All the art metal work—as well as the iron construction—in the Manhattan Hotel has been accomplished by that firm, and those interested in fine art work in iron and bronze will find a study of this firm's work in the Manhattan Hotel well repaid.

A view of the exterior reveals to the observer a succession of iron window guards, conforming to, and carrying out the design of the carved stone panels. These are of wrought iron, all hand forged, and seem to merge into the delicate tracery of the lace

curtains adorning the windows. The eye then falls on the handsome railings which run along the entire frontage of the hotel, and which are broken up with cleverly executed "grotesques," and capped in various places with clusters of lamps of ornate design. The balconies above are of attractive conception, while the balconies on the top floor form an unusual and remarkably effective skyline.

Passing on to the Ladies' Entrance, on the Madison Avenue side, we find a permanent marquee as a protection against the elements. This covered enclosure is one of the most interesting studies of its kind. It has handsome columns capped with lamps, the former being of open wrought iron work. To the north of the Ladies' Entrance is the Driveway, which is also a unique feature. Its doors are of massive oak with metal trimmings. Although weighing over 1,000 pounds each, these enormous doors can be opened and closed by a child, owing to the very nice adjustment secured by ball-bearing hinges—used for the first time under such conditions, and forming a most ingenious contrivance.

Returning to the Forty-second Street front we pass through the main entrance and come upon the beautiful and stately mezzanine, with its antique bronze balcony producing a striking effect. Underneath the mezzanine flat form appear the doors leading to the café and barber shop. These are in iron frame and beveled glass with a delicate art etching in the centre. We then pass on to the main entrance to the elevators, where we find a lavish profusion of ornamental iron work. The enclosures are handsomely and elaborately modelled in high relief, in Louis Quinze style, the doors being of very heavy construction. The sliding doors have the unusual feature that they move noiselessly and with ease, thus avoiding the incessant clatter so

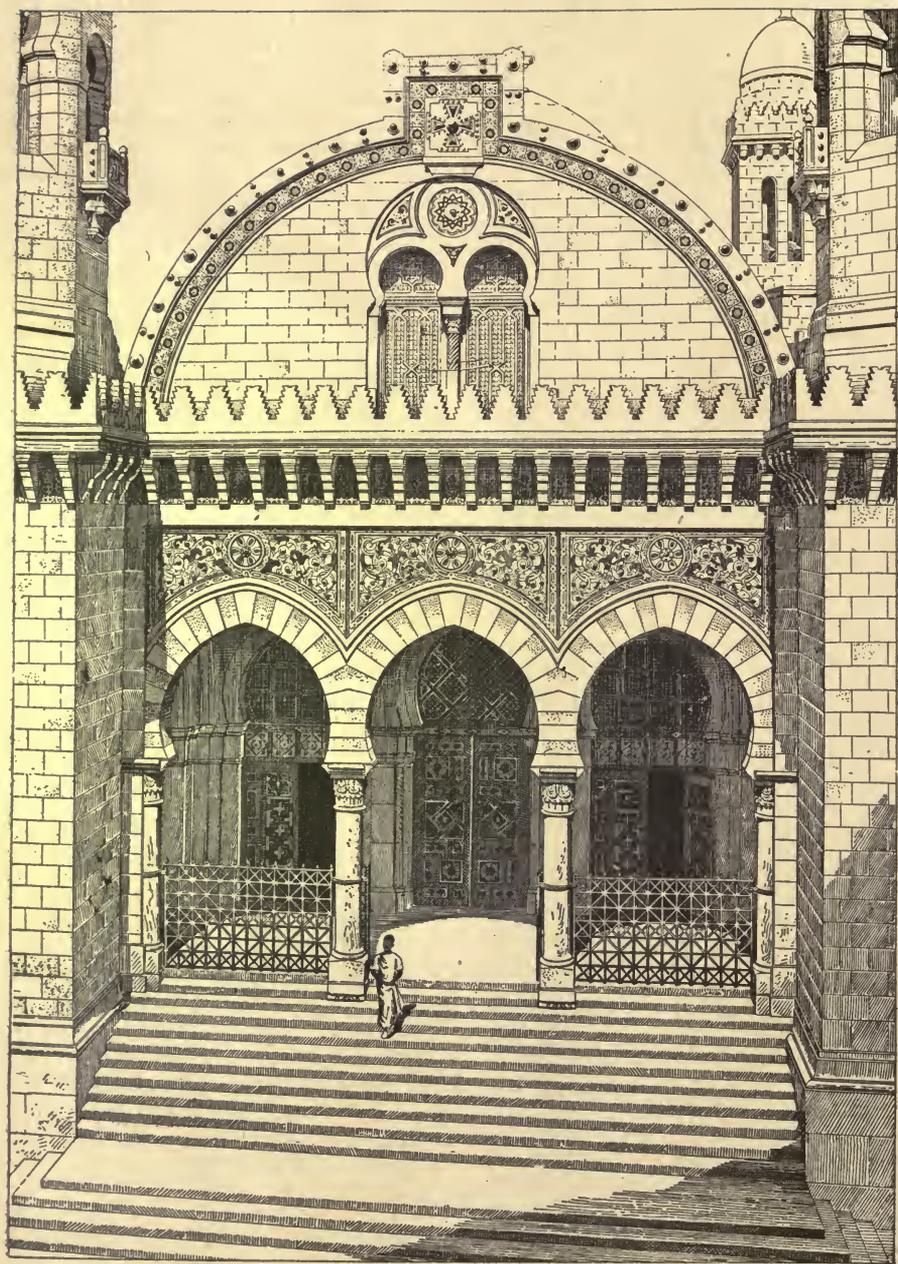
noticeable in many buildings. The panels of the enclosure are in duplex bronze and the general sharpness, good moulding and fine finishing of the castings are remarkable. Indeed these are features of the entire metal work in which the Jackson works seem to excel. The open grill work is also a feature, and also the elevator indicators in Louis Quinze design.

A noticeable improvement in elevator construction meets the observer in the heavy glass centrepieces framed in the elevator doors. In order to avoid the strong draft that would otherwise come through the open grill work, glass doors are built on the inside of the grill doors, thus practically hermetically sealing up the enclosures, yet enabling the guests to see when the operator of the car is coming to their floor and enabling him to see the guests. These glass doors can be swung open inwardly for cleaning purposes and can be unhinged in summer if required. They possess beauty as well as utility.

Ascending to the second floor we find the balustrade in polished antique bronze. Here the pleasant and agreeable effect of the grill work in the elevator doors is particularly noticeable. Passing to the end of the handsome corridor we come upon the enamelled iron elevator especially designed for the use of ladies, and running from the ladies' entrance on the Madison Avenue side, heretofore referred to, to every floor in the building. The sliding doors of these elevators are a feature. They are of a particular construction, designed to save space in the width. The ladies' stairway around the elevator enclosure on every floor is in enamel work to match the whole. This, by the way, is a cylindrical self-supporting stairway, carried entirely from the wall strings, and is a most interesting piece of construction.

The entire metal work done by the Jackson works in the Hotel shows the highest artistic skill. The Pompeian bronze finish—"verdi antique," as it is sometimes called—is a noticeable feature, as well as the colors and finishes, particularly those in rose copper.

A glance at some important art work in metal may be seen in other productions of the JACKSON ARCHITECTURAL IRON WORKS. Among these are the exceedingly handsome bronze stairs and elevator enclosures in the Metropolitan Life Insurance Company's Building, on Madison Avenue and Twenty-third Street. These are carried out in a very delicate detail of enrichment. The iron work in the Progress Club, the Hoffman House and the library of the Elbridge T. Gerry residence is of a rich character and contains some of the finest examples of modern high-class metal work in both finish and construction. The Museum of Natural History contains some fine electro-plated work of the Jackson works, while the treatment of the bronze work in the rotunda of the Netherland Hotel is admirable. They also produced the stairs, elevator enclosures and all the ornamental and structural work in the Carnegie Music Hall; the massive iron work and stairs in the Produce Exchange; the bronze counter railing work in the Union Trust Company's building, and the massive hammered wrought iron gates erected for Mr. W. K. Vanderbilt, at Newport, designed by the late Richard M. Hunt. Among their recent work is that in progress on the New York Savings Bank building, the New York Athletic Club, the American Lithograph Company's building on Fourth Avenue and Nineteenth Street, and the American Surety Company's high structure, the last named showing an example of engineering of interest to engineers all over the world.



Algiers, Africa.

FACADE OF CATHEDRAL.

M Ballu, Architect.