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MODERN ARCHITECTURE.*



THE subject that has been assigned to me is that which I should have chosen had I been left free to choose. It is more true, perhaps, of architecture than of any other of the arts that deal with form that the prosperity and advancement of it depend upon the existence of an enlightened public as well as of skillful practitioners. It is true that the public, any public, is enlightened by the efforts of the practitioners and can be enlightened in no other way. The philosophy of art at least is a philosophy teaching by examples. It is only by familiarity with admirable examples that we come to admire rightly. A sense of responsibility for one's admirations may be called the very beginning of culture, nor can a culture be deemed complete that does not include a discriminating judgment of the works of the oldest and the most pervading of all the arts. It is not to be expected, nor perhaps to be desired, that an educated layman shall possess theories of art and standards of judgment either acquired for himself or derived from others. But it is very much to be desired that he shall have a sense so habitual and automatic that it may well seem to be instinctive of the fitness or unfitness, congruity or incongruity, beauty or ugliness of the buildings that he daily passes, and that in any case must exert upon him an influence that is not the less but the more powerful for being unconsciously felt. Such a sense comes most readily and most surely from the habitual contemplation of excellent works. It is the birthright of a man who has been born and reared in a country in which admirable monuments have been familiar to him from childhood. It is a means of education from which we in this country are necessarily to a great degree debarred, for I suppose it will not be denied that there are many American communities in which one may grow up to manhood without once having sight of a respectable specimen of the art of architecture. I remember standing in the square upon which fronts the Cathedral of Rouen, one of the loveliest of the legacies the Middle Ages have bequeathed to modern times, and watching the busy throng of Frenchmen and Frenchwomen, the citizens of a bustling modern town, that passed beneath it. There was scarcely one, of whatever rank in life, that did not pause, in passing, long enough to cast one recognizing and admiring glance at the weatherworn and fretted front. Think what an education the daily sight of such a monument constitutes, how it trains the generations that are reared in its shadow, and how deeply a people so unconsciously trained would fail to admire the very smartest and most ornate edifices of many American towns. It seems to me that something of the same beneficial influence is shed upon the people of New York from the spire of Old Trinity, as it soars serenely above the bustle of Broadway, and stops the vista of Wall

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Street, or upon the people of Boston by the ordered bulk of the tower of the new Trinity looming so large over the dwellings of the Back Bay.

You may retort upon me that the influence of the cathedral of Rouen is not perceptible in the modern architecture of Rouen; but there is much to be said in behalf of the modern architecture that surrounds Rouen cathedral, as of the modern architecture that surrounds Notre Dame of Paris, in comparison with the current architecture of our American towns. I shall not be charged with underrating the essential differences between the mediæval and the modern architecture of France and of Europe, or with overrating the modern architecture, because the difference is in a manner the main theme upon which I have to address you. It seems to me one of the most pointed contrasts that the world affords between a living and progressive and a conventional and stationary art. But the modern building, the current building of France, and more or less of Europe in general, is distinguished in this comparison with the current building of American towns—and in either case I am speaking not of the exceptional works of art, but of the prevailing and vernacular work of journeymen—it is distinguished by certain qualities that we must admit to be valuable, by sobriety, by measure, by discretion. Very much of this comes, no doubt, from the learning of the schools, from the learning in particular of the great school that since the time of the great Louis has dominated the official architecture of France, and the influence of which is transmitted as we see to the common workman. You will remember that these qualities of sobriety, measure, discretion are the very qualities which Mr. Matthew Arnold finds to distinguish French literature in the comparison with English literature, and which, in that well-known essay of his upon "The Literary Influence of Academies," he attributes so largely to the existence of the French Academy. I cannot help thinking that he exaggerates this influence, and that the undeniable difference is more largely due than he admits to national characteristics and less largely to the machin-

ery of institutions. In the national building, however, the national school of France has without doubt had a great influence. It is an influence which is spreading over the world, and which has already established a distinct cult of its own among American architects that is at present perhaps the dominant influence in our own architecture, an influence the nature of which I shall ask you to consider. But these excellent qualities which French building shows in comparison with American building seem to me to be also due largely to the existence of relics of the great art of the past. In England, where there has never been any official inculcation of architecture, the current building is characterized in comparison with our own, though in a less degree, by the same qualities that characterize the French building. It is less violent, more restrained, more decorous. And England, like France, possesses those monuments the very presence of which seems to temper crudity and to repress eccentricity, to make impossible the architectural freaks that seem to be spontaneously generated in the absence of their restraining influence.

It is not many years since an English traveler, not an architect, but a traveled and cultivated man of the world, delivered the opinion that there was no country in the world in which the art of architecture was at so low a stage as in the United States. He had just traversed the continent and there was certainly no malice in his remarks, the spirit of which was entirely amicable. There can be little doubt that his saying simply reflected the impression that an experience like his would be apt to make upon any cultivated European. It is the impression derived, not from the buildings that are the boast of a few towns, the exceptional and artistic performances, but from a general survey of the building of the country. The building is doubtless more crude and provincial, as a rule, in the newer than in the older parts of the country, and one main reason for this is that the older parts of the country, the towns of the Atlantic seaboard that comprised the colonies, contained examples of col-

onial building that were as nearly as the builders could make them examples of the current architecture of the old country. They were not very many in number nor very extensive in scale, nor very durable in construction. But every one of the Atlantic towns possessed one or more of them that have lasted to our own time or nearly so, and that gave to the builders who lived and worked in their presence examples of measure and sobriety and discretion that tended to preserve them from the excesses of the pioneer builders who had not the advantage of any models whatever.

It is not to be wondered at that some twenty years ago many of the young architects of this country should have become so revolted by the extravagance and the crudity of the current building as to revert to the colonial building for models. And this accounts for the vogue, short lived as it was, which the so-called Queen Anne fashion of building had in this country. Although the revival of it was imported from England and not developed here, it was connected with this admiration for the colonial work which, though it was commonly tame, was at least never wild. The crudity of much of the work that was done during the Gothic revival set architects to studying the classic detail of the old mansions, although a knowledge of this detail was simply part of the stock in trade of the carpenters and the plasterers who were imported during the eighteenth century, and continued to be part of the stock in trade of their successors during the first quarter at least of the nineteenth. Though Queen Anne, specifically so called, was a very passing fashion, the preference for classic detail, as an orderly and understood assemblage of forms in the use of which it was difficult to attain a positively offensive result, survived Queen Anne, and has been so potent ever since that the present tendency of architecture in this country is a reversion to the Renaissance that has prevailed in Europe for the past three centuries. This tendency has been very powerfully promoted by the increasing influence on this country of the Paris school of

fine arts, of which the pupils, filled with its traditions, are every year returning in increased numbers to take part in the building of the United States. Especially has this tendency been stimulated just now by the brilliant success of the architecture of the Columbian Exposition, which was essentially a display, on an imposing scale, of modern French architecture; though it is also true that some of the architecture even of the World's Fair was French not so much after the *École des Beaux Arts* as "after the *School of Stratford atte Bowe*."

The attractiveness of the French ideal in architecture is so great that it has imposed itself all over Europe, inasmuch that the new quarters of nearly all European cities are becoming imitations of Paris. It is visibly tending to impose itself upon this country also, under the influences to which I have referred, the revolt against the crudity of our unschooled vernacular building and the zealous propagandism of the pupils of the *Beaux Arts*, and of the architects whom they have in their turn influenced. It would be folly to dispute that the training of the French school, upon which the architectural training of all Europe is more or less modeled, is a most valuable training in qualities and accomplishments that are common to all architecture and that are needed in all architecture. Founded as it is upon the study of the classic orders, it confers or cultivates a perception of proportion and relation, of adjustment and scale, in other words, of that sobriety, measure and discretion which, in whatever style they may be exhibited, or whether they be exhibited in works not to be classified under any of the historical styles, so plainly distinguish the work of an educated from the work of an uneducated architect, precisely as the literary work of a man who has studied the models of literature is distinguished from that of an uneducated man. One may freely own that the current architecture of Europe is more admirable than the current architecture of America, and that, if that were all, those architects would have reason who urge us to adopt current European methods in the study of archi-

ecture and to naturalize, or at least to import current European architecture. But it is not American architecture alone, it is modern architecture in general that leaves a great deal to be desired as the expression in building of modern life. It is not only our own country, but it is the time that is architecturally out of joint. No thoughtful and instructed person who considers what an expression classic architecture was of classic life, or mediæval architecture of mediæval life, is satisfied with modern architecture, for the reason that no such student can regard it as in the same degree or in the same sense an expression of modern life. The French seem indeed to be very well satisfied with the result of their methods of instruction and practice, but it is worth while to remember that the whole professional and literary life of that French architect whose writings have had the strongest influence upon this generation of readers—I mean Viollet-le-Duc—was a protest against the aims and the methods of the *École des Beaux Arts*, and the academic architecture which it produced, as unrepresentative of modern French life, as unreasonable and untrue. So inveterate and so radical was his opposition to the manner in which architecture was taught at the French national school, the training of which is held up to us as a completely adequate model, that on his appearance there as a lecturer he was mobbed by the students whom he was invited to address, and to whom his criticisms seemed to be almost in the nature of blasphemy.

The late Mr. Richardson, whose great services to the architecture of this country no one will deny, who was himself a graduate of the *École des Beaux Arts* and who brought its training to the solution of American architectural problems, bore interesting testimony in the same direction. He told me that, revisiting France many years after his academic experiences in Paris, and when he himself was at the height of his success and celebrity, he had looked up those who had been the most promising of his fellow-students. He found them well-established archi-

tecs and many of them occupying the position, so much coveted in France, of government architects. But he found them—I do not remember that he made any exceptions, but at any rate he found many of them—deeply dissatisfied with the official architecture which was imposed upon them by the necessities of their careers, lamenting that they were not at liberty to transcend the trammels of the official style, and envying him the freedom he enjoyed in this respect as a practitioner in America and not in France. Surely we may very well hesitate before acknowledging that a system which is thus deprecated, by theorists on the one hand and by practitioners on the other, as inadequate to the architectural needs of the country from which it is derived and in which it has been naturalized for two hundred years, and as incompetent to produce the architectural expression of French life, may be transplanted with confidence as promising complete satisfaction of our own needs, and as offering us the expression in architecture of American life.

How are we to explain the anomaly thus presented? While every other art is living and progressive, architecture is by common consent stationary, if it be not actually retrograde. In every other art the artists have their eyes on the future. They do not doubt that the greatest achievements of their arts are before them and not behind—

“That which they have done but earnest of the things that they shall do.”

In architecture alone men look back upon the masterpieces of the past not as points of departure but as ultimate attainments, content, for their own part, if by recombining the elements and reproducing the forms of these monuments they can win from an esoteric circle of archæologists the praise of producing some reflex of their impressiveness. This process has gone so far that architects have expected and received praise for erecting for modern purposes literal copies of ancient buildings, or, where the materials for exact reproduction were wanting, of ingenious restorations of those buildings.

In architecture alone does an archæological study pass for a work of art. The literature of every modern nation is an express image of the mind and spirit of the nation. The architecture of every modern nation, like the dress of every modern nation, is coming more and more to lose its distinctiveness and to reflect the fashion of Paris. It was not always so. The architecture of Greece and Rome tells us as much as antique literature tells of Greek and Roman life. Mediæval architecture tells us so much more of mediæval life than all other documents of that life that they become insignificant in the comparison, and that from their monuments alone the modern man can succeed in penetrating into the spirit of the Middle Ages. Nay, in our own time the architecture of every country outside the pale of European civilization is a perfectly adequate and a perfectly accurate reflex of the life of that country.

I have spoken of the analogy between architecture and literature. It seems to me that it is not fantastic, and that if we follow it it may lead us to a comprehension of the very different state of the two arts to-day. Nobody pretends that modern literature is not an exact reflex of modern civilization. If we find fault with the condition of it in any country we are not regarding it as a separate product which could be improved by the introduction of different methods. We are simply arraiging the civilization of the country, thus completely expressed. If we find one literature pedantic, another frivolous and another dull, we without hesitation impute these defects as the results of national traits. The notion that any modern literature is not a complete expression of the national life no more occurs to us than the notion that any modern architecture is such an expression.

Now, modern architecture, like modern literature, had its origin in the revival of learning. The Italian Renaissance in architecture was inextricably connected with that awakening of the human spirit which was the beginning of modern civilization. It is not that classic models have been discarded or neglected in the one art and retained

in the other, for down to our own generation at least a liberal education, a literary education, has been a classical education. Whatever the baccalaureate degree is coming to mean now, for several centuries it has meant a knowledge of the masterpieces of Greek and Roman letters, as the education of an architect has during the same time implied a knowledge of the masterpieces of Greek and Roman building. A main difference has been that in literature the classical models have been used, and in architecture they have been copied. If writers had hesitated, even while Latin was the universal language in Europe, to use locutions "that would have made Quintilian stare and gasp," it seems to me quite certain that there could have been no literary progress, while it seems to be almost a tenet of the architectural schools, and at any rate it is a fair deduction from modern academic architecture that no architectural progress is possible. There, alone in the work of mankind, the great works of the past are not alone useful for doctrine, for reproof, for correction, for instruction, are not even models in the sense in which we use the word in reference to other arts, but are "orders" to be carried out as literally as the conditions will allow, are fetiches to be ignorantly worshiped and invested with mysterious powers.

At the time of the revival of learning the purists were as strenuous in literature as they are even yet in architecture, and for a time as prevailing. The literary classics were to them what the architectural classics still are to the practitioners of official architecture, and the vocabulary of the ancients as sacred a repertory of words as the orders of the ancients a repertory of forms, to which nothing could be added without offense. To them it was not requisite that a writer should express his mind fully; it was not even necessary that he should have anything to say, but it was necessary that his Latinity should be unimpeachable. So long and so far as it was enforced, the restriction to the ancient vocabulary had as deadening an effect upon literature as the like restriction still has upon

architecture. Lord Bacon has given an excellent account in a few sentences of the consequence of this "more exquisite travail in the languages original" upon the progress of literature and the advancement of learning. "Men began to hunt more after words than matter; more after the choiceness of the phrase and the round and clean composition of the sentence, and the sweet falling of the clauses * * than after the weight of matter, worth of subject, soundness of argument, life of invention or depth of judgment." The literary purists of the Renaissance were inevitably impatient of men who were preoccupied with what they had to say rather than with their way of saying it, and were especially incensed against the school philosophers "whose writings," to quote Bacon again, "were altogether in a different style and form, taking liberty to coin and frame new terms of art to express their own sense, and to avoid circuit of speech, without regard to the pureness, pleasantness, and, as I may call it, lawfulness of the phrase or word." Substitute "form" for "phrase or word" and you have here an exact statement of the respective positions of the progressive architect and of the architectural purist, and of the reason why it is out of the question that architecture should advance when the teaching and the practice and the judgment of it are confided to the architectural purists.

In literature the restriction did not last long. If it could have lasted it would have arrested the literature and the civilization of Europe, for a demand that nothing should be expressed in new words was in effect a demand that nothing new should be expressed. Such a restriction, when the human spirit had once been aroused, it could not accept. The instinct of self-preservation forbade its acceptance. Men who had something to say insisted upon saying it, saying it at first in barbarous Latin, to the pain of the purists who had nothing to say and did not see why anybody else should have anything to say that could not be expressed in the classical vocabulary; saying it afterwards in "the noble vul-

gar speech" which at first, and until it had been developed and chastened and refined by literary use, seemed cruder and more barbarous still. The progress of mankind being at stake, the purists in literature were overwhelmed. Only the progress of architecture being at stake in the other case, the purists have prevailed and architecture has been sacrificed, with only local and sporadic revolts, and these for the most part within our own century, in place of the literary revolution that was triumphantly accomplished four centuries ago.

It was not accomplished without a struggle. The "more exquisite travail in the languages original," when there was no other but classical literature, had induced in scholars the belief that the masterpieces of that literature would never be equaled. It is, I believe, still questioned by scholars whether the classic masterpieces have been equaled even yet; while it is the opinion of scholars that the languages in which they were composed are still the most perfect orders of speech that have existed. It was natural, then, that men who had nothing in particular to say, or at any rate felt no urgent need of expressing themselves, should have deemed that classic literature was complete as well as impeccable, and that its limitations could not be transcended. Fortunately for us all, there were other men who felt, with Browning, that

"It were better youth
Should strive, through acts uncouth,
Toward making, than repose on aught found
made,"

and these men were the greatest scholars as well as the greatest thinkers of the age. Politian, of whom it has been said by a critic of our own time that he "showed how the taste and learning of the classical scholar could be grafted on the stock of the vernacular," ridiculed the purists in better Latin than their own. "Unless the book is at hand from which they copy," he said, "they cannot put three words together. I entreat you not to be fettered by that superstition. As nobody can run who is intent upon putting his feet in the footsteps of another, so nobody can write well who does not dare to depart

from what is already written." And while the Italian scholar was deriding the Italian pedants, the Dutch scholar, who did not even look forward to a time when the vernacular should supplant Latin, yet protested against the imposition of classic forms as shackles upon modern thought. "Hereafter," said Erasmus, "we must not call bishops reverend fathers, nor date our letters from the birth of Christ, because Cicero never did so. What could be more senseless, when the whole age is new, religion, government, culture, manners, than not to dare to speak otherwise than Cicero spoke. If Cicero himself should come to life, he would laugh at this race of Ciceronians."

It would be as presumptuous in me as it is far from my intention to disparage academic training, in architecture or in literature. The men who have done most towards building up these great literatures that are at once the records and the trophies of modern civilization have for the most part been classical scholars, and classical scholarship stood them in particularly good stead when they worked in the vernacular, especially during the formative periods of these literatures, when there were as yet no standards or models but those of antiquity. Perhaps what seems to us the most autochthonous of our literature owed more to this culture than we are apt to suppose. "I always said," Dr. Johnson observes, "that Shakespeare had enough Latin to grammaticise his English." These writers derived from their classical studies a literary tact that could have been imparted so well in no other way. Certainly the same thing is true of the classically trained architects. Whether they are working in the official style that has been the language of their schools, or have attempted the idiomatic and vernacular treatment of more extended and varied methods of construction than the very simple construction of Greece, which was expressed with consummate art, and the more ambitious and complicated construction of the Romans, which yet is simple compared with our modern constructions and which cannot be said to have attained its artistic expression; in either case

there is equally in their work this tact, this measure and propriety that bespeak professional training. It is not the training that I am deprecating, but the resting in the training as not a preparation but an attainment. There is another pregnant saying of Bacon that would well recur to us when we see the attempt to meet modern requirements without departing from antique forms, and to carry out academic exercises in classic architecture into actual buildings: "Studies teach not their own use, but that is a wisdom without them and above them, won by observation." It is as if an educated man in our day should confine his literary efforts to Latin composition. Very curious and admirable essays have been made even in modern Latin and even in our own time. To see how near one can come to expressing modern ideas in classical language is an interesting and useful exercise, by the very force of the extreme difficulty of even suggesting them, and the impossibility of really expressing them. When the modern Latinist has finished this circuitous and approximative progress he has produced what—a poem? No, but only an ingenious toy for the amusement of scholars, a "classic design." If he devoted his whole literary life to the production of such things we should be entitled to pronounce decisively that he had nothing to say, or he would take the most direct way of saying it. It would be evident that he was preoccupied with the expression and not with the thing to be expressed, not with the idea but "with the pureness, pleasantness and, as I may call it, lawfulness of the phrase or word."

A living and progressive classic poetry, in our day, we all perceive to be merely a contradiction in terms. Classicism is the exclusion of life and progress; and a living and progressive classic architecture is in fact equally a contradiction in terms. Forms are the language of the art of building and architectural forms are the results and the expression of construction. This is true of the architecture of the world before the Renaissance, excepting the Roman imitations of Greek architecture. It is true even now of the archi-

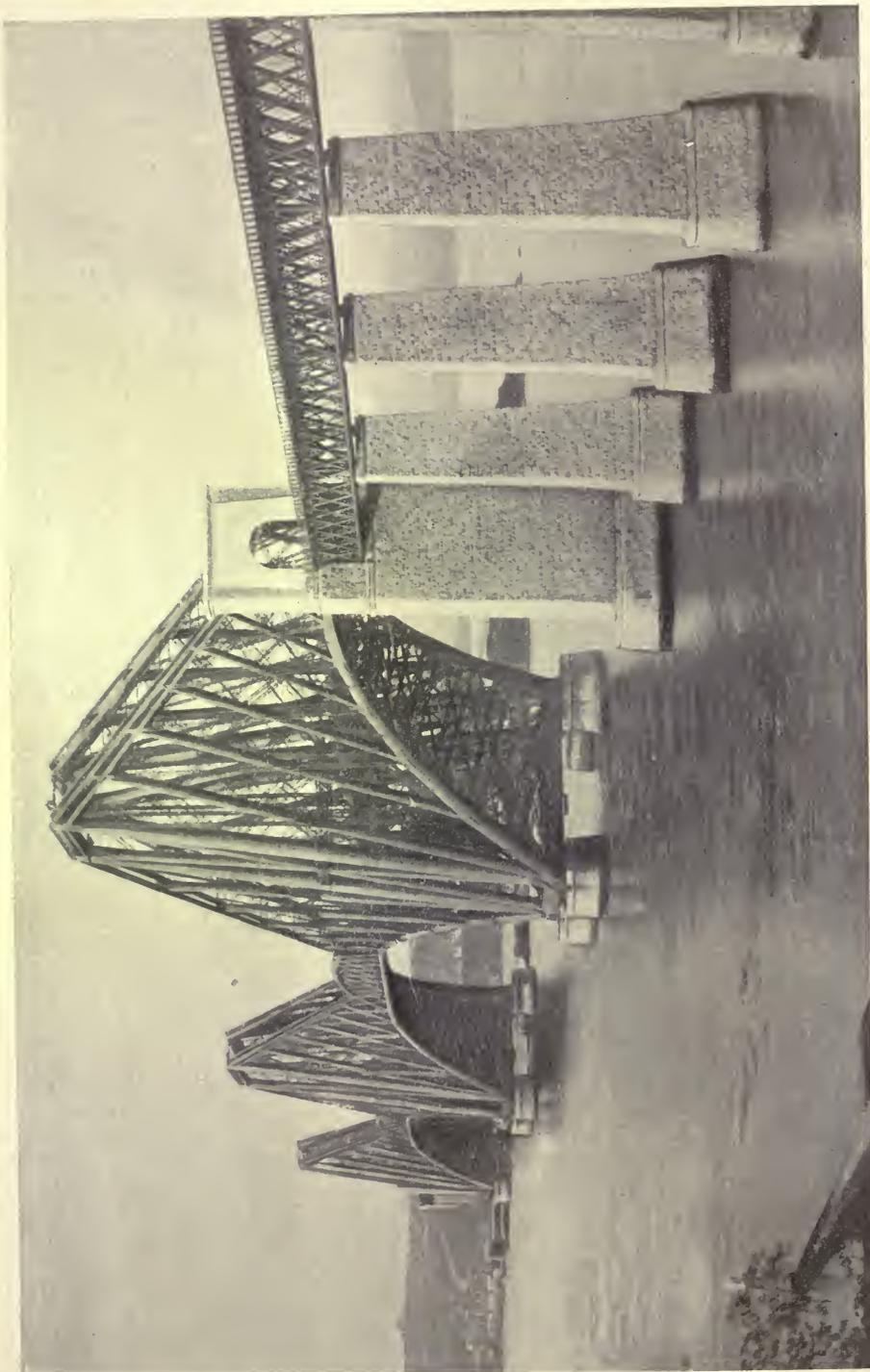
ture of all that part of the world which lies outside the pale of European civilization. It is only since the Renaissance, and in Europe and America, that classic forms has been used as an envelope of constructions not classic, and that the attempt to develop building into architecture has been abandoned in favor of the attempt to cover and to conceal building with architecture. This attempt is beset with difficulties, by reason of the modern requirements that cannot be concealed. I have heard of a classic architect saying that it was impossible to do good work nowadays on account of the windows. This is an extreme instance, doubtless, but the practitioner of classic architecture must often be as much annoyed by the intrusion of his building into his design, and the impossibility of ignoring or of keeping it out altogether, as the modern Latin poet by the number of things of which the classic authors never heard that he has to find words for out of the classic authors. The versifier does not venture to complain in public, because everybody would laugh at him, and ask him why he did not write English. But the classic architect is not afraid to make his moan, and to complain of the intractability of modern architectural problems, or to excuse himself from attempting a solution of them upon the ground that they do not fit the classic forms. He is not likely to find sympathy in his complaint of the oppressiveness of shackles which, in this country at least, he has voluntarily assumed. Why should we not laugh at him also? He, too, may be recommended to write English, which in his case means to give the most direct expression possible to his construction in his forms, and to use his training to make this expression forcible, "elegant" and scholarly; poetical, if the gods have made him poetical; at any rate, "to grammaticise his English" instead of confining himself to an expression that is avowedly indirect, circuitous, conventional and classic, a "polite language" like the Latin of modern versifiers. *Si revivisceret ipse Cicero, rideret hoc Ciceronianorum genus.*

The repertory of the architectural

forms of the past is the vocabulary of the architect. But there is this difference between his vocabulary and that of the poet, that a word is a conventional symbol, while a true architectural form is the direct expression of a mechanical fact. Any structural arrangement is susceptible, we must believe, of an artistic and effective expression. Historical architecture contains precedents, to be acquainted with which is a part of professional education, for many if not for most of the constructions commonly used in modern building. But classic architecture does not contain them. The Greek construction is the simplest possible. The more complicated Roman construction was not artistically developed and expressed by the Romans themselves and the literary revivalists of classic architecture of the fifteenth century restricted themselves and their successors to the Roman expression without very clearly understanding what it was. They were more royalist than the king, more Ciceronian than Cicero. If we are to accept the statement of Viollet-le-Duc, Vitruvius himself, if he had submitted his own design, as he describes it, for the basilica of Fano, in a competition of the École des Beaux Arts at the beginning of this century, would have been ruled out of the competition for his ignorance of Roman architecture. But in any case, the classical building embraces but a small part of the range of constructions that are available to the modern builder. To confine one's self to classic forms means therefore to ignore and reject, or else to cloak and dissemble, the constructions of which the classic builders were ignorant, or which they left undeveloped, to be developed by the barbarians. And here comes in another restricting tenet of the schools, that you must not confuse historical styles. No matter how complete an expression of an applicable construction may have been attained, if it does not come within the limits of the historic style that you have proposed to yourself, it is inadmissible. This is not a tenet of the official schools exclusively. It is imposed wherever architecture is prac-

ticed archæologically. In the early days of the Gothic revival in England, Gothic building was divided and classified, more or less arbitrarily, and it would fatally have discredited an architect to mix Early English and Middle Pointed, or to introduce any detail for which he had not historical precedent, and this without regard to the artistic success of his work but only to its historical accuracy. It was not until the architects of the revival outgrew this superstition that their work had much other than an archæological interest. Any arbitrary restriction upon the freedom of the artist is a hindrance to the life and progress of his art. While it is no doubt more difficult to attain unity by the use of constructions that have been employed and expressed in different ages and countries than by renouncing all but such as have been employed together before, and have been analyzed and classified in the schools, the artist is entitled to be judged by the success of his attempts and not to be prevented from making it. American architects are happy in being freer than the architects of any other country from the pressure of this convention. By the introduction of the elevator, some twenty years ago, an architectural problem absolutely new was imposed upon them, a problem in the solution of which there were no directly available and no directly applicable precedents in the history of the world. That many mistakes should be made, and that much wild work should be done was inevitable. But within these twenty years there has been attained not only a practical but in great part an artistic solution of this problem presented by the modern office building. The efforts of the architects have already resulted in a new architectural type, which in its main outlines imposes itself, by force, of merit, upon future designers and upon which future designers can but execute variations. This is really a very considerable achievement, this unique contribution of American architects to their art. While the architects who have had most to do with establishing it have been learned and trained as well as thought-

ful designers, it seems to me that they have had advantages here that they could not have enjoyed where conventional and academic restrictions had more force. Certainly, in all the essays that have been made towards the solution of this new problem, none have been less fortunate and less successful than those of academically trained architects, who have undertaken to meet a new requirement by an aggregation of academic forms, and to whom studies had not taught their own use. But the problem is by no means yet completely solved. The real structure of these towering buildings, the "Chicago construction," is a structure of steel and baked clay, and when we look for an architectural expression of it, or for an attempt at an architectural expression of it, we look in vain. No matter what the merits or demerits may be of the architectural envelope of masonry, it is still an envelope, and not the thing itself, which is nowhere, inside or out, permitted to appear. The structure cannot be expressed in terms of historical architecture, and for that reason the attempt to express it has been foregone. The first attempts to express it must necessarily be rude and inchoate. The new forms that would result from these attempts would be repellent, in the first place because of their novelty, even if they were perfect from the beginning; in the second place, because in the nature of things and according to the experience of mankind, they cannot be perfect from the beginning, for the labors not only of many men but of many generations have been required to give force and refinement to the expression in architectural forms of any system of construction. If the designer, however, is repelled by the strangeness of the forms that result from early attempts to express what has not been expressed before, if "youth" will not "strive through acts uncouth toward making" but takes refuge in "aught found made," that is the abandonment of progress. The Chicago construction doubtless presents a difficult problem. All problems are difficult till they are solved. But the difficulty is no greater than other difficulties that have been



THE EAST DRIVE

encountered in the history of architecture and that have been confronted and triumphantly overcome. Is there anything in modern construction that is *a priori* more unpromising, as a subject for architectural treatment, than a shore of masonry, built up on the outside of a wall to prevent it from being thrust out by the pressure from within? I do not know what the modern architect would do as an artist if as a constructor he found it necessary to employ such a member. In the absence of applicable precedents he would be apt to conclude that so ugly an appendage to his building would not do to show, and to conceal it behind a screen-wall nicely decorated with pilasters. But the builders upon whom the use of this member was imposed, not having enjoyed the advantage of a classical education, saw nothing for it but to exhibit the shore and to try to make it presentable by making it expressive of its function. Their early efforts were so "uncouth" that the modern architect, if he had seen the work at this stage, would have been confirmed in his conclusion that the shore was architecturally intractable. The mediæval builders kept at work at it, master after master, and generation after generation, until at last they made it speak. Made it speak? They made it sing, and there it is, a new architectural form, the flying buttress of a Gothic cathedral, an integral part of the most complicated and most complete organism ever produced by man, one of the organisms so like those of nature that Emerson might well say that—

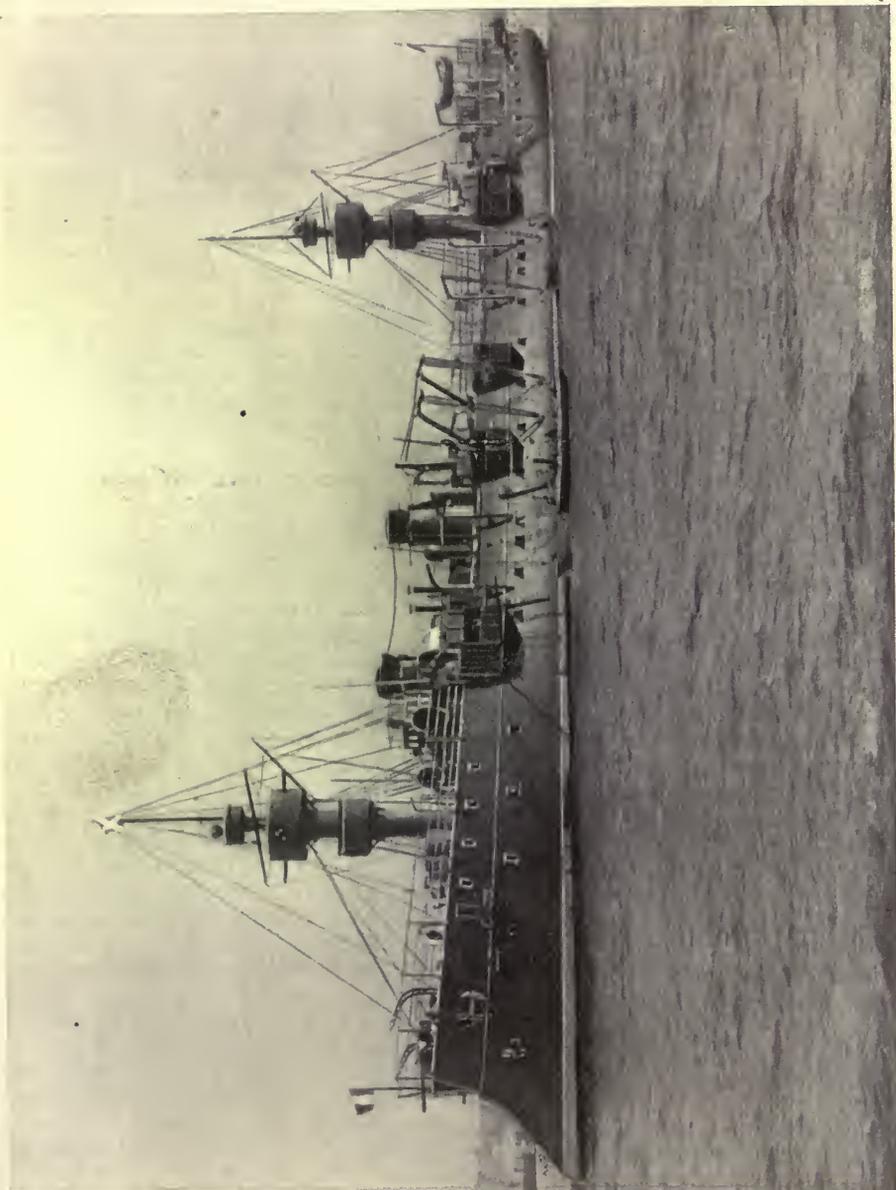
"Nature gladly give them place,
Adopted them into her race,
And granted them an equal date
With Andes and with Ararat."

The analogy is more than poetically true. In art as in nature an organism is an assemblage of interdependent parts of which the structure is determined by the function and of which the form is an expression of the structure. Let us hear Cuvier on natural organisms.

"A claw, a shoulder-blade, a condyle, a leg or arm-bone, or any other bone separately considered, enables us to discover the description of teeth to which they have belonged; so also re-

ciprocally we may determine the form of the other bones from the teeth. Thus, commencing our investigations by a careful survey of any one bone by itself, a person who is sufficiently master of the laws of organic structure may, as it were, reconstruct the whole animal to which that bone had belonged."

This character of the organisms of nature is shared by at least one of the organisms of art. A person sufficiently skilled in the laws of organic structure can reconstruct, from the cross-section of the pier of a Gothic cathedral, the whole structural system of which it is the nucleus and prefigurement. The design of such a building seems to me to be worthy, if any work of man is worthy, to be called a work of creative art. It is an imitation not of the forms of nature but of the processes of nature. Perhaps it was never before carried out so far or so successfully as in the thirteenth century. Certainly it has not been carried out so successfully since. This has not been for lack of constructions waiting to receive an artistic expression, for mechanical science has been carried far beyond the dreams of the mediæval builders, and the scientific constructors are constantly pressing upon the artistic constructor, upon the architect, in new structural devices, new problems that the architect is prone to shirk. He is likely to be preoccupied with new arrangements and combinations of historical forms. He asks himself, as it has been said, not what would Phidias have done if he had had this thing to do, but what did Phidias when he had something else to do. An architectural form, being the ultimate expression of a structural arrangement, cannot be foreseen, and the form which the new expression takes comes as a surprise to its author. He cannot more than another tell beforehand with what body it will come. Take one modern instance, the so-called cantilever of modern engineering. Some of you may be familiar with representations of the Forth bridge in Scotland, in which that recent device has been used upon the largest scale thus far and with the most impressive results. There is one of the new architectural forms for which we are unthinkingly asking. Is it conceivable



THE "JEAN BART."

that this form could have occurred to a man who sat down to devise a new form, without reference to its basis and motive in the laws of organic structure? And so it is always with real architectural forms. There have been very voluminous discussions within this century upon the "invention" of the pointed arch, discussions which have come to little because they have started from a baseless assumption. Architectural forms are not invented; they are developed, as natural forms are developed, by evolution. A main difference between our times and the mediæval times is that then the scientific constructor and the artistic constructor were one person, now they are two. The art of architecture is divided against itself. The architect resents the engineer as a barbarian; the engineer makes light of the architect as a dilettante. It is difficult to deny that each is largely in the right. The artistic insensibility of the modern engineer is not more fatal to architectural progress than the artistic irrelevancy of the modern architect. In general, engineering is at least progressive, while architecture is at most stationary. And, indeed, it may be questioned whether, without a thought of art, and, as it were, in spite of himself, the engineer has not produced the most impressive, as certainly he has produced the most characteristic monuments of our time. "A locomotive," says Viollet-le-Duc, "has its pe-

culiar physiognomy, not the result of caprice but of necessity. Some say it is but an ugly machine. But why ugly? Does it not have the true expression of brutal energy?" The modern battleship is purely an engineering construction, developed in accordance with its functions as a fighting-machine, and without conscious reference to the expression of these functions. Yet no one who has seen a typical and completely-developed example of the modern war ship, such as the *Jean Bart*, which has been seen in American waters, needs to be told that it is a more moving expression of the horrors of war than has ever been seen in the world before; that no poet's or painter's dream of

"That fatal and perfidious bark,
Built in the eclipse and rigged with curses dark,"

appeals with anything like so much force to the imagination as this actual, modern and prosaic machine of murder. What may we not hope from the union of modern engineering with modern architecture, when the two callings, so harshly divorced, are again united, and when the artistic constructor employs his cultivated sensibility and his artistic training, not to copying, but to producing, no longer to the compilation of the old forms, but to the solution of the new problems that press upon him; when he shall have learned the use of the studies that teach not their own use.

Montgomery Schuyler.





THE BRIDGE AT ALCANTARA.

ARCHITECTURE IN SPAIN.

I.



SI stood one evening in the large openings of the Sala de Embarjadores in the Alhambra looking out upon one of the most beautiful sights that the old palace affords, I was struck with the total difference between the architectural methods which imbued the Moslem and the Christian builders of Spain.

Around and above you is the intricate network of arabesque ornamentation, so beautifully refined, once vivid and gorgeous in color-effect, but now softened by the hand of time. The walls are of immense thickness, and the slim columns with their perforated spandrils seem insufficient to carry their superincumbent weight, and above you is a ceiling of wood honeycombed with stalactite pendentives. Below you are the bright groves and walks along the river Darro, and if you listen you may hear

strains of music which seem to dull the senses into a sort of voluptuous repose and cause you to forget the years that have elapsed since Moslem hands reared the walls around you. The sun, regardless of Moorish palace or Gothic shrine, sinks lower and lower over the Vega, and breathes out a golden effulgence which calls to mind a thousand and one dreams of poetic fancy. It is the effect of an art foreign to the ideas of the Gothic builders, and contrasts so strongly with the almost gloomy pointed architecture which we have visited, that the architect notes the difference at once. It speaks of such distinct differences of art, that it is natural in speaking of the Architecture of Spain to divide the subject into three heads at least, the first of which, without wholly omitting mention of prehistoric Roman works would treat of the works of the Moors during the eight centuries after their conquest in 711 A.D.

And since as a matter of fact many of the best works in other styles were erected during the same period of time, the second division would be even more important than the first, and would leave us then (3) to inquire into the work that was done in Spain after the expulsion of the Moors in 1492. To a thoughtful mind the differences of these styles would lead at once to a question as to how far the invasion of this mysterious people moved the builders of Spain in their subsequent work.

Since the above division of the subject does not give any decided impression of the different styles that we shall find in Spanish Architecture, it may be well at the commencement to put down a few century posts which in a few words will classify the subject. We shall find after the Roman works much of the Byzantine style up to the tenth century. Of course the Moorish work will be found from the eighth to the fifteenth centuries, while woven in with it we shall note the important works in the Romanesque style from the eleventh to the thirteenth century. Then come the magnificent works of the pointed style, and the less important *Modejar*, which ran from the thirteenth to the sixteenth century. Finally, it would be unjust to the study of the Art in Spain unless we touched on those styles which being variously influenced by the Art of other countries brought out works which have been placed under the headings of Renaissance, Plateresque and Churrigueresque styles: but of these we shall touch lightly as they are by far the least important increments in the fabric of Spanish Architecture. They will be found in the fifteenth, sixteenth and seventeenth centuries.

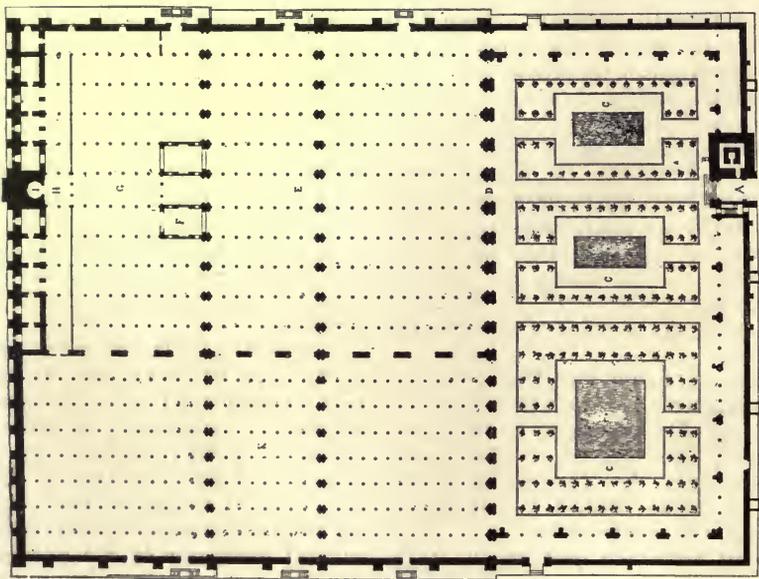
It is a noticeable fact that wherever the Romans placed their foot they left their mark behind them, a mark, too, not easily obliterated. They were noble builders, the Romans, stern and simple in design, grand in conception and strong in construction.

As you approach picturesque Segovia, in the centre of Spain, you see before you a deep valley between the town and the surrounding mountain country. It is over 100 feet deep, and

in order to bring water from these mountains the Romans followed out their instincts as mighty builders, and since the water ten miles off would not come to them, they accommodated themselves to the water, and threw a huge aqueduct across the valley for its accommodation. This was before the invasion of the Moors and was said to have been in the time of Trajan. This aqueduct itself is over 100 feet high, built of granite in stones of huge size, and is constructed in two enormous tiers of arches without cement or mortar. Like the Pont du Gard at Nismes, it teaches a lesson in construction not to be forgotten. It is a Spanish possession, yet totally unlike Spain; one sight of it marks its period as well as if the carver had left in huge letters the legend of its Roman origin. It is large, grand and monumental! In like manner the famous bridge of Alcántara shows clearly the marked peculiarity of the Roman mind. From examples of a like character in almost every other country it is fair to assume that no other nation (except possibly the Egyptians) would have spanned the lordly Tagus in a manner that would have its birthmark so indelibly stamped.

Toledo stands on a rocky promontory almost girdled by the river, which for ages has boiled through the rent in the Castilian mountains; it is necessary to gain its approach from the eastern hillside, and the Roman spirit leaving only a small arch on the land approach, spanned the river at a single jump. As you wind around the spur of the mountain, this view of the bridge strikes you full in the face, and you have but one word to express your admiration. It is Roman!

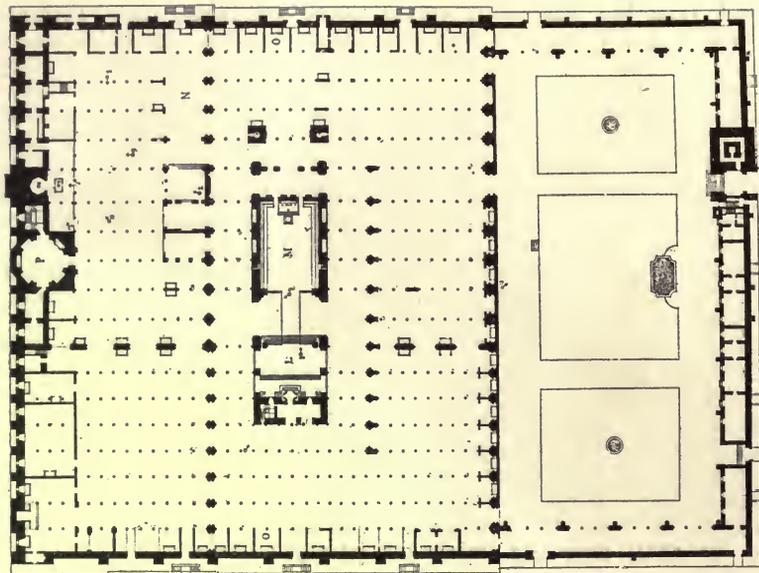
Without speaking of more examples of this character of work in Spain, it will be sufficient to say that other most interesting monuments of Roman skill are to be found in Tarragona, Murviedro, Italica and Merida, all following this general character, and expressing better than words can tell the monumental character of the nation which gave them birth. As a matter of course this would follow, since any country in making conquest is likely to express its own ideas of art in its Architecture. It



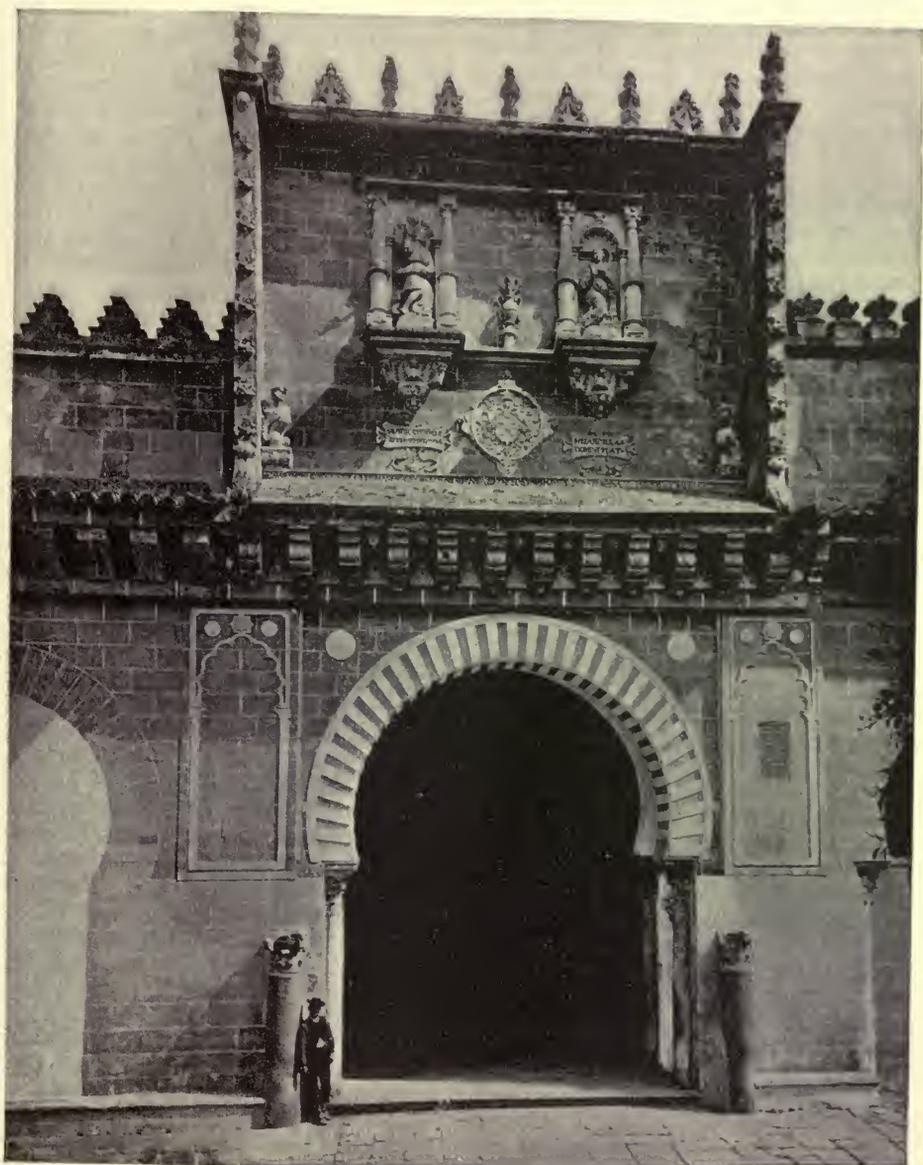
PLAN OF BUILDING AS IN THE TIME OF THE ARABS.

THE MOSQUE, CORDOVA.

Dates of Construction: A. D. 786; 796; 961; 967; 988; 1001; 1523; 1593.



PLAN OF BUILDING AS AT PRESENT.



ENTRANCE TO THE MOSQUE, CORDOVA.

is less true, however, of Spain than almost any other country, for we cannot really give it credit for being the father of any good style; the Romans, the Moors, the French and the Germans, as well as the Spaniards, each in turn worked on its soil, and formed whatever of art there is in the country. Exception to this statement might possibly be found in that mixture of styles known as the Mudejar style.

This truism leads one to speak more fully of this point. We are apt to think of Spain as being the possessor of a style which we dub Spanish architecture, and to have a sort of instinctive feeling that it is the outcome of a poetic feeling which pervades the literature and history of the country, an atmosphere of imagery full of Eastern splendor. Undoubtedly the charming Spanish romances of life and character and the fierce struggles between Christian and Pagan art has led to this mistaken idea, for that part of the architecture which most fully carries out this feeling is not Spanish at all, but distinctly Moorish, and it is thus to this art that we should turn our thoughts more fully.

The Moors were a noble race in truth, and for eight centuries they held a footing in the country which they had invaded and conquered. They brought with them the poetic fancies of the East, full of the splendor of a sunny land. They adorned the country by a cultivation of art and science, and in their architecture built with an exuberance of ornament and a free use of color which is fascinating in the extreme. Such work could never have been done by a European nation.

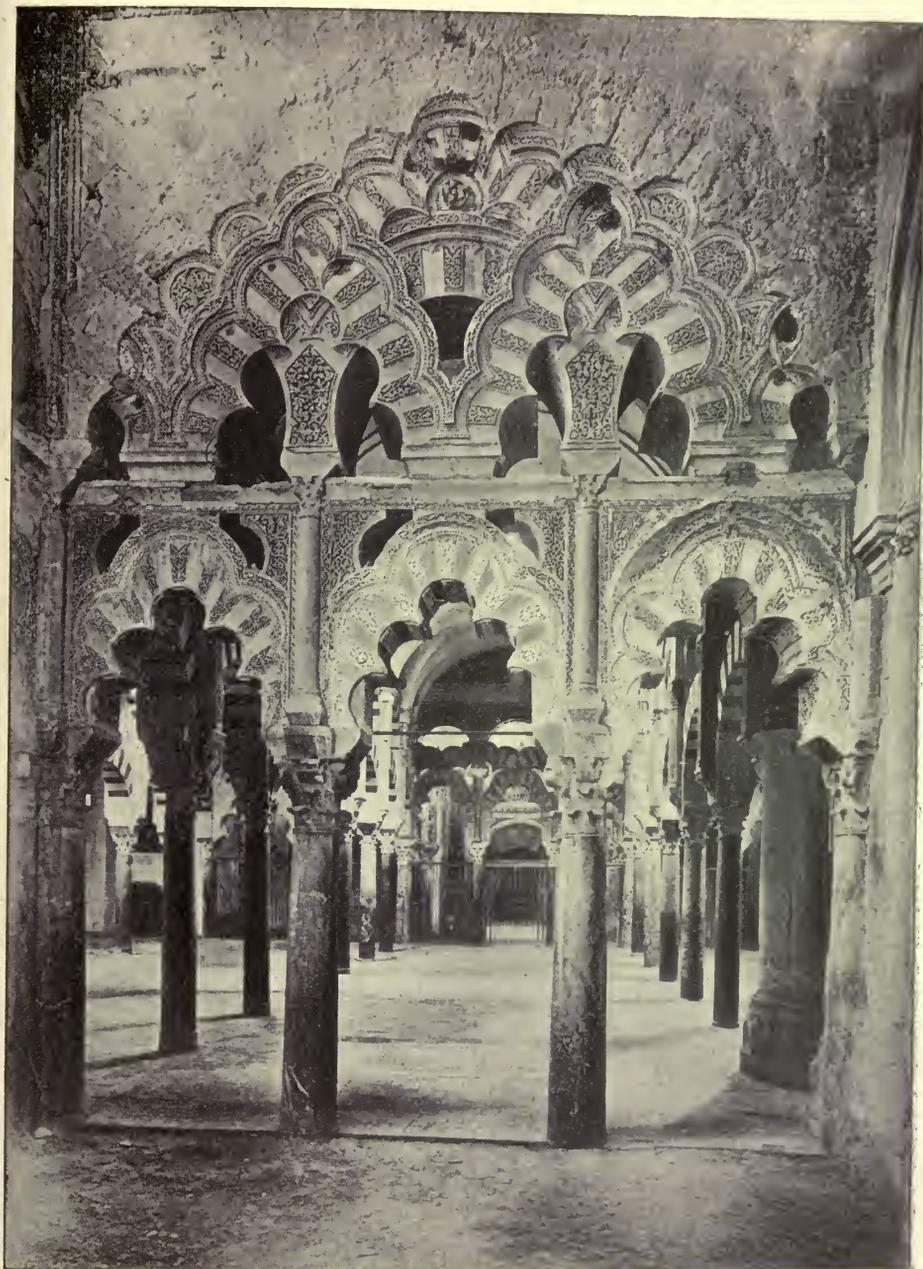
The invasion of the Moors was in 711 A. D., when King Roderic and the fairest of the nobility succumbed to the fierce onslaughts of the Pagans. This was on the plains of Guadalete near Cadiz, and ere long their sway extended Eastward and Northward. The magnificence of the conquerors was at once shown in their public edifices, and nowhere more fully than at Cordova, the capital of the empire. Their first work was a palace at Azahra, of which naught remains. History, however, affirms that it was more wonderful by

far than the Alhambra, formed of lakes and hanging gardens, courts and halls, whose construction was marvelous and whose decoration was full of ivory and gold inlays. Of the Mosque at Cordova, however, we may speak understandingly, and, since it was one of the first and largest works executed by the Moors, it will serve as an illustration of their spirit in ecclesiastical work.

It was commenced by Kaliph Abd-el-Rahman in the year 786 A. D., and completed by his son Haschem. There had formerly been a basilica on the spot, but the Moors desiring to perpetuate their name by a building that should rival the finest sanctuaries of the East bought and tore down the old work and commenced the new.

The Mosque of Cordova is a parallelogram, 294 feet east and west, with nineteen aisles, by 360 feet north and south, with thirty-three aisles. Like the mosques of Cairo and Damascus, the nineteen aisles opened on the court of Oranges, in the centre of which was the font of ablution. The roof was supported by 1,200 monolithic columns of precious stone, the fruit of conquest and presents from Nismes, Narbonne, Seville, Tarragona, Constantinople, Carthage and other Eastern cities. With such a motley array of material, varying in size and length, it became a problem how to utilize them. The outcome was that the architect chose 12 feet as the uniform height of his columns, and by dint of adding capitals of all orders and sizes and sinking many of the columns into the ground, he formed a low-roofed structure, which, carrying out the idea of the East, became the finest example in Europe of a true temple of Islam.

The ceiling was wood, richly carved and decorated, and formed into a species of groinings by wooden ribs, and the extreme height was 40 feet. Over each row of columns is a tier of open Moorish arches, and still above this a secondary tier. In order to fill more completely the space of the upper tiers, an interlacing arch was added, the spring of which came down upon the keystone of the arch below. These arches were of brick in huge voussoirs covered with stucco of an intricate de-

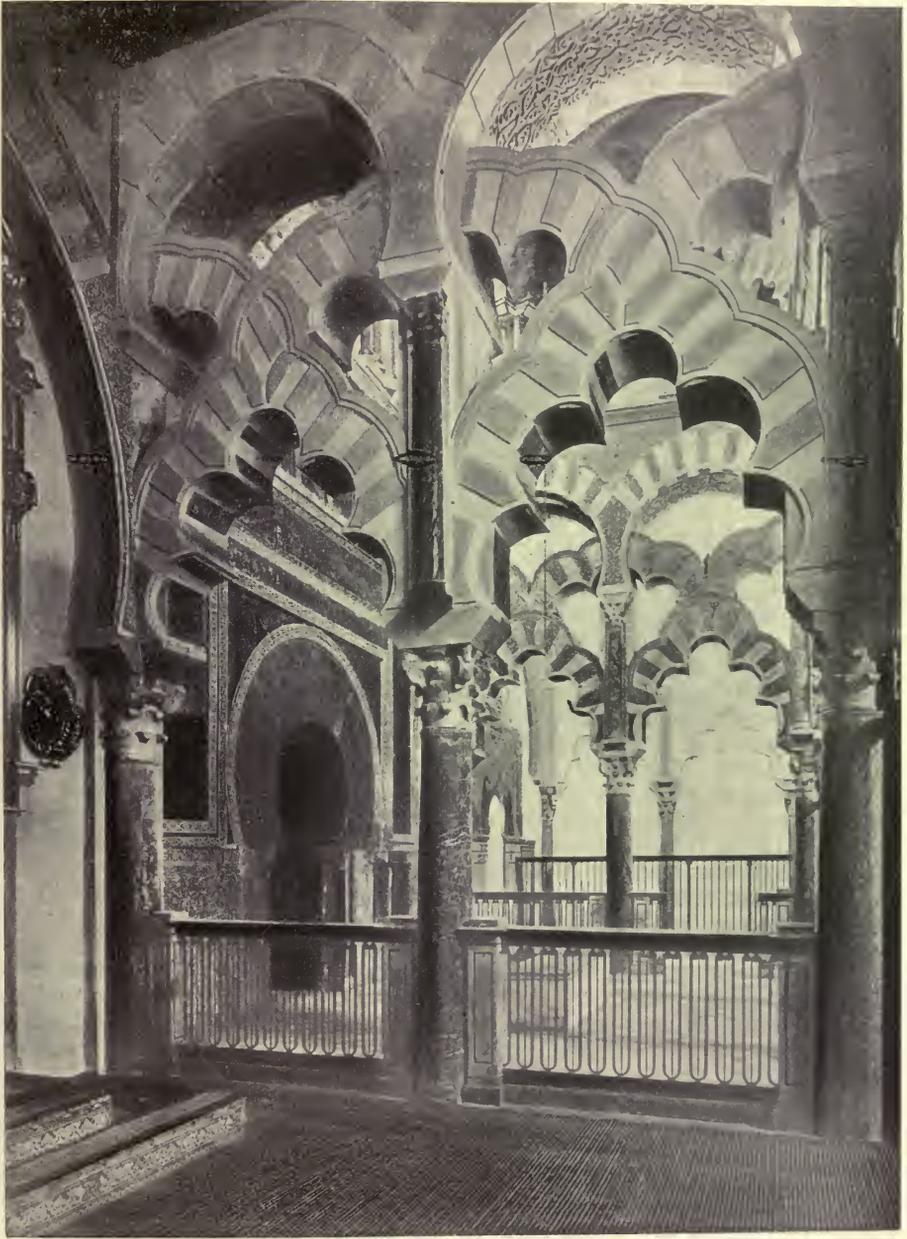


THE CENTRAL NAVE OF THE MOSQUE, CORDOVA.

Date, A. D. 961-967.



CEILING OF THE MOSQUE, CORDOVA.



THE SANCTUARY OF THE MOSQUE, CORDOVA.

Date, A. D. 961-967.

sign of arabesques. Much of this delicate work remains and may be seen to advantage in the central nave, so called.

Observe now the result of this ruse. Although the proportion of the design of the column cap is but 12 feet, the full height of the interior in effect is 40 feet. But even this height, when we take into account the extreme size of the place, gives the impression of simply a forest of rich columns. Contrast this with the lofty and severe spirit of a Gothic edifice, and the difference marks one of the characteristics of Moorish art.

On the north wall of the Mosque is the Mihrab or sanctuary, a recessed alcove roofed over with a single block of pure white marble, the entrance arch being faced with one of the most exquisite examples of decorative Byzantine art in gold and lapis lazuli mosaic. It was here that the sacred Koran was kept, and it was towards this spot that every true son of Islam turned his eyes in devotion. In the spirit of true art it may be said that the decorative work of the Mosque is far superior to that of the Alhambra; as far superior indeed as marble and mosaic is superior to decorated stucco.

I have spoken of the fact that originally the outer wall of the Mezquita with its facing columns was open to the Orange Court. This was following out the ancient idea, and indeed the present plan of the famous mosques of Damascus and oldest mosque of Cairo, and was intended to give light and air to the interior. Whether there was added hyperthral lighting, or, as Fergusson believes, an open arcade near the ceiling on the side is an open question. The exterior is hardly to be considered architecturally, since it is a simple massive wall surface with flame-like parapet, and square buttress towers. It was a simple study of needs, simply expressed, and as such is good art.

It is a singular fact that while Spain during this period was under Moorish domain, we find two distinct styles of art often in the same district. This is due to the fact that while the Moors held the Christians, whom they had conquered, in detestation, they still

allowed them to erect buildings in their own methods, although they never borrowed much from them in their own works. That they were lenient in this respect is admitted. And that they were highly refined is also shown in their work, and history tells that they advanced rather than retarded the country both in art and science. An example of this refinement is shown in the little Church of Christo de la Luz at Toledo, erected anterior to the Eleventh Century, a small church, but in some ways one of the most interesting in Spain. It is but 21 feet square, and the roof is supported by four large columns, over which are horse-shoe arches with piercings above the arch. The compartments thus formed are vaulted, and the vaults themselves project at their bases, forming still other horse-shoe vaults with surface ribs. But the most beautiful part of this design is the central vault, which, rising higher than the others, forms a dome almost Byzantine in character, but strictly Moorish in design. This dome is pierced with windows which throw the light down into the interior. In fact, I do not remember of there being any side windows. It must be noted in this building that the roof does not form the ceiling, and that the vaults are not constructional, but simply ornamental, being framed in wood, and covered with stucco. In this respect it differs from many of the Eastern Moorish buildings, which are built of stone, and are actually constructional in design.

A century later nearly all traces of Byzantine influence disappeared from the work of the Moors, and we find the beautiful church of Santa Maria la Blanca, also at Toledo, as a good example of its period. It was not built as a Mosque, but as a Jewish Synagogue. This statement has been questioned, but it seems highly improbable that the followers of Mohammed would have built the Church in such a form, and not facing the sacred city of Mecca; further, the locality was the old Jewish quarter of Toledo. Here is a building reasonably well preserved, and beautiful in the extreme. Marble and stone columns give place to brick construc-

tion of piers, which are large polygonal pillars covered with stucco. There is a nave and two side aisles, with eight horse-shoe arches springing from the columns. These arches are simple and massive, and the spandrils only ornamented. A noticeable feature are the

A. D., is an oblong building, 40x20, and its Christian use is at once recognized by the chancel, which is divided from the nave by a horse-shoe arch resting on engaged columns of marble and having the usual secondary horse-shoe arch above.



INTERIOR OF SANTA MARIE LA BLANCA, TOLEDO.

capitals, of later date, however, which, being of cement, show that they were not moulded on, but carved out of the solid material itself. This is interesting, since it gives a freedom to the work unattainable by the use of a model. The roof over the nave is composed of wood with tie beams laid closely together, and corbels moulded under the ends. As if to depart as far as possible from Moorish precedent also, the method of lighting was from a sort of clerestory, the filled-in arches of which are still visible.

To retrace our steps a little it is necessary to touch only on one church which is said to be the only remaining example of a Christian Church built by Christians in the Moorish style. It is the Church of Santiago de Panelva away up in Leon, and hence one of the few examples of Moorish art in the north of Spain. It was built about 950,

The builders here followed out a true vaulted roof over the nave, and yet carried up the chancel into a square lantern, with flat decorated wooden roof. At the other end of the church the entrance is through two horse-shoe arches, supported on a central column, over which is an arch similar to the chancel opening. The Moorish spirit, however, could not leave the work altogether Christian in character, so the builders introduced semi-circular apses, with dome not unlike a Mihrab, and wholly Moorish in character, and having done this, undoubtedly felt their conscience eased for engaging in Christian church building. This fact seems to show that the work was erected under Moorish guidance, and it is probable that both Moor and Christian had united their labors to some extent at this period.

This fact is the more clearly shown

by examples of Christian Architecture that were contemporaneous with the works that we have mentioned, and show conclusively the two currents that flowed side by side. No one can doubt that Santa Maria de Naranco or San Miguel de Lino at Oviedo were built somewhere between the eighth and ninth centuries, and we find records of San Pablo and San Pedro at Barcelona which fix the date at about 900 and 980, A. D. Unfortunately I could find no photographs of these little chambers, but they are much alike and one will suffice to show the influence which guided their builders. It must be remembered that the division between Spanish and French towns at that time did not exist, that such towns as Carcassonne and even Toulouse were under Spanish influence as to art. And, further, the stream of education in art, especially of the Romanesque orders, was flowing from the east, through Italy and Provence, and naturally followed the curve of the Gulf of Lyon. Although the Spaniards called this art "Obras de los godos," in every sense of the word it was to them Gothic. Thus San Pablo is a cruciform church with three apses at the East and a lantern over the cross, not unlike its prototype in Arragona. The roof is interesting as it is of wood, vaulted and forming over the surface a series of half-domes. The nave arches, supported by pillars, are also interesting, since the capitals are Romanesque in design and full of animal life. This was a noted difference from the Moorish, for the Moors used no figures of animals or life of any sort in their carving and decorations.

In looking up these old churches, so interesting because they would tend to show the type of building erected during the struggle which followed the invasion of the Moors, I know of but two more examples in the north of Spain, San Pedro and San Felin at Gerona, the former built of volcanic scoria, and the latter with a beautiful spire and massive fortress-like walls, which indeed they were, for tradition tells that the Moors attacked it, stormed it, and only captured it after a fierce struggle.

Passing on, therefore, a little over a century, we are brought to consider

some of the work of the twelfth century, so interesting in other countries, and no less so in Spain. The century opens with one of the most interesting specimens of Architecture to be found in Spain. Here we are enabled to observe how much effect size alone has on our perceptions of art, and to see how infinitely more precious is the quality of design. A grandiose cathedral of the sixteenth century, almost holds in its arms the well-preserved body of a twelfth century production, the former uninteresting because of the intrinsic beauty of the latter. I am not aware that we know the name of the architect of the old cathedral of Salamanca, but we do know that it was built through the influence of Geronimo, a warlike prelate, and we see the influence of his spirit in the massiveness of its walls, which lent to it the epithet "Fortis Salmantina." The date of its erection is variously stated, from 1095 to 1102 A. D. As far as the church itself is concerned, there is nothing remarkable except its simplicity. It has a nave with side aisles, transepts and three apses toward the east, the central one large and with pointed arch of the same size, as over the transept. Had the architect followed in the style of the Byzantine Church of St. Front at Perigueux which was begun 984 A. D., he would have commenced his lantern directly over the crown of his pointed cross arches, and, like St. Front, would have constructed a dark and not especially interesting feature. But this was exactly what he did not do, and therein lies the credit of beautiful design. Over the arches he ran a corbelled cornice and two stories of arcades in which are windows. Just here also great strength of design is shown, since on the first tier there is but one window to each cardinal point of the dome, while above the effect is made delicate and airy by three windows, all round-headed. The triumph of skill, however, is in the method of resisting the thrust of the superimposed load of tiled roof, which is effected by four beautiful circular pierced pinnacles, the whole forming a piece of construction that shows no defects of age and being beautiful is a joy to every student of architecture.



THE EAST END OF THE OLD CATHEDRAL, SALAMANCA.

Date, A. D. 1102-1180.

It was this lantern which so impressed the late Mr. Richardson in his travels, and which he studied in the erection of the Trinity Church in Boston. It is interesting to note the fact that in the erection of the new cathedral the Junta of Architects agreed that the old church must remain untouched, and backed their opinion by an oath which ended, "so I swear and amen."

Zamora is similar to Salamanca, the design being nearly like it, except that the roof is a full half sphere; the interior is smaller, however, being 23 feet

dral, too, with its battlemented parapet, overhangs the wall as if to throw down the gauntlet of the church to invaders, and to proclaim it ready to fight both the world, the flesh and the devil. It was a fighting church, the very cannon-ball ornamentation on its towers even seeming to proclaim its victories, and I love to think of those old builders who in 1091 A. D. inwrought their spiritual defences with the bulwarks of the town. Since most of it, however, is of later date, we shall speak of it in another article. Go down now under



FACADE OF SAN PEDRO, AVILA.

Date, A. D. 1120.

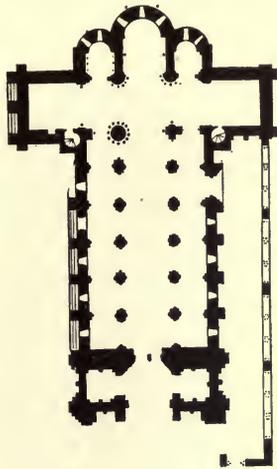
wide, with noble piers 7 feet in diameter. The date is 1174 A. D. Owing to the question as to the exact date of Salamanca and the admitted nearness of their dates, it looks as if the same mind conceived both churches.

At this point my mind wanders off to one of the first towns which I visited in Spain. A marvelously picturesque town is Avila! What an amount of interest is attached to those old walls with their round towers! The cathe-

dral, too, with its battlemented parapet, overhangs the wall as if to throw down the gauntlet of the church to invaders, and to proclaim it ready to fight both the world, the flesh and the devil. It was a fighting church, the very cannon-ball ornamentation on its towers even seeming to proclaim its victories, and I love to think of those old builders who in 1091 A. D. inwrought their spiritual defences with the bulwarks of the town. Since most of it, however, is of later date, we shall speak of it in another article. Go down now under

the great arched wall and outside of the town; here are several churches, among them St. Vincente, erected before 1200 A. D. and thus within the province of our study. The plan is so beautifully simple that I cannot help showing it. The west end is massive and square set, with two buttressed towers, and a grand arched exterior porch, a singular design, but beautiful in effect. Between the massive towers is a huge arch, and

from column to column are two solid screen balustrades admitting one to the entrance. The huge Romanesque arch of the doorway moulds out in five enriched recesses, each with a pedestal and saint. Above is a simple cornice richly decorated with an open balcony.



San Vicente Avila

Possibly it is the delicacy of enrichment and the massive simplicity of this whole front that moves one, but certainly the whole conception far exceeds almost any other like entrance of its date.

On entering, the plan is a simple nave, with side aisles and transepts, and the usual three eastern apses with a simple central lantern. The side wall has simple pointed windows, and the ceiling is flat, of wood. Between the second and third piers from the cross is a western entrance, which opens upon a wide cloister of later date. This cloister has occasional piers and clustered shafts and is singularly beautiful, although suggested by San Millan, one of the best examples of pure Romanesque in Segovia.

I have said that it is noted that the Moors seldom borrowed any features from the Christian work. In this Church, however, there are several screens of a decorative effect that show that the Christians were not slow in accepting many of the beauties of Moorish art. The arches near the great porch are thus filled with a trellis-

work which reminds one of the East. They are simply a diaper of squares, the edge of which are cut in pattern, and not unlike the *meshrebayeh* of Eastern cities, and thus showing the Moorish influence.

On the whole, this church, designed undoubtedly by the school of late Romanesque architects, is one of the most interesting and noble of its class. It is worthy of more than passing interest, and, as Mr. Street says, gives such an insight into the careful study of those old builders that he was somewhat disheartened. "For here," says he, "in the twelfth century we find men executing work which, both in design and execution, is so unreasonably in advance of anything that we ever see done now that it seems almost vain to hope for a revival of the old spirit in our own days; vain it might be in any age to hope for better work, but more than vain in this day if the flimsy conceit and imprudent self-assertion which characterize so much modern (so called) Gothic is still to be tolerated! For evil as has been the influence of the paralysis of art which affected England in the last century it often seems to one that the influence of thoughtless complaisance with what is popular, without the least study, the least art or the least love for their work on the part of some of the architects who pretend to design Gothic buildings at the present day may, without one knowing it, land us in a worse result even than that which our immediate ancestors arrived at."

As a matter of fact, the exterior of Avila, is full as interesting as the interior, and singularly enough as one walks around the walls he finds several buildings of the Romanesque order with pointed vaulting that must have been built after the walls of the town were erected. San Esteban and San Andres, San Segundo and San Pedro show how much of interest there is in this our northern Spanish town. Since I have a photograph of the latter, one will suffice. It has a nave, aisles and very deep transepts, the usual triple apse and lantern. All the columns are large, the windows small and the detail of extremely massive Romanesque spirit.



SANTA VERA CRUZ, SEGOVIA.

Date, A. D. 1150.

The most interesting feature is the western front, with a glorious circular window and wheel tracery. The entrance has a richly moulded archivolt with dog-teeth enrichment, and the huge buttresses at either side give wonderful strength to the simple facade. The date of this church is 1120 A. D.

We have thus been speaking of a type of architecture in Spain during the twelfth century, in which, while the vaultings and windows are often pointed, the character of the work is undoubtedly Romanesque. Some of them, St. Vincente for instance, have a system of buttressing, but it is more of the pilaster order than the result of any defined grouping of vault trusts. Therefore they are not Gothic in principle.

In all countries and in all times there have been that class of building which have been designed and built contrary to the usual methods in vogue. To this class belongs a singular little church which is not without its beauty. It is known as the Church of Vera Cruz at Segovia and stands on a hillside by the road, bare of any vestige of foliage. Its date is 1150 A. D. It reminds one of the Mosque of Omar at Jerusalem. I shall never forget the impression of this church on entering. There were the walls faced with marbles of beautiful colors, an aisle all

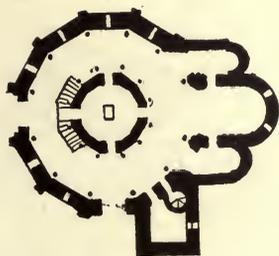
A witness grasped the chain—if he told the truth no effect followed; if he told a falsehood the link dropped off.

Our little church at Segovia, however, is before us.

Here also we have a polygonal church with a large circular headed Romanesque entrance ornamented with billet moulding and the moulding supported on engaged columns. A large square tower stands on the Southeast corner, and the Eastern angles are composed of three apses; there is also a secondary entrance to the South.

More interesting than the exterior is the interior, however, for upon entering one is confronted by a raised vault, with pointed vaulting, the walls of which hold the vaulting from the side walls. There is thus formed a central chapel raised about 20 feet above the floor level, lighted from a lantern above, with a circular interior dome. Around this, chapel it might be termed, ran a continuous aisle, with its apsidal chapels all lighted from round-headed windows near the cornice. Exactly what the raised chapel was intended for, I do not know; were it not for an altar in the centre one might conclude that it was a raised choir, but the chapel idea is generally conceded. This little church is used now by the peasants outside the city and not the least touching point is an old stone cross, just outside the door, at which kneel the faithful, and before whose weather-beaten stones one instinctively raises his hat. The storms of many centuries have passed over the little church with its cross, and still left it to do its work of sanctification for the poor of Segovia.

I cannot pass two other churches of Segovia which mark a peculiarity of this era. They are San Martin and San Esteban and were built about 1180 to 1210 A. D. The mark of peculiarity of which I speak are the external cloisters, which seem to be confined to this locality. They are evidently a means to prevent the excessive heat from penetrating the interior and are exceedingly beautiful. If we observe those connected with San Esteban, we see they are double clustered shafts with round arch and dog-teeth ornamentation telling of Romanesque influ-



PLAN OF CHURCH, VERA CRUZ.

around, and in the very centre a huge rock projecting six feet high above the floor, the actual Dome of the Rock on which the Temple of Jerusalem originally stood. The Moslem legend is interesting. At this very spot was formerly suspended a chain from heaven, the test of truthful evidence.



ence, while some of the openings in the tower are pointed. This tower, by the way, is worth reproduction. As I ap-

proached the church, a little fellow endeavored to stand on his head on top of an old fountain, but when he saw we were sketching, he left his perch and watched us intently. The tower has a lower story, massive and strong in design, with five stories above, each with double openings, the first tier pointed, the second round arch, the third and fourth pointed and heavily moulded with columns, and the fifth composed of three openings, with round arches and round pierced windows. Above is an interesting roof story with small dormers.

In all this we see the gradual mixture of the Romanesque influence with the pointed.

Possibly the best-known example of a convent building of this era is the Convento de las Huelgas at Burgos, which was commenced in 1180 by Alonso VIII, who, having used a good



THE CONVENT (DE LAS HUEL GAS), BURGOS.

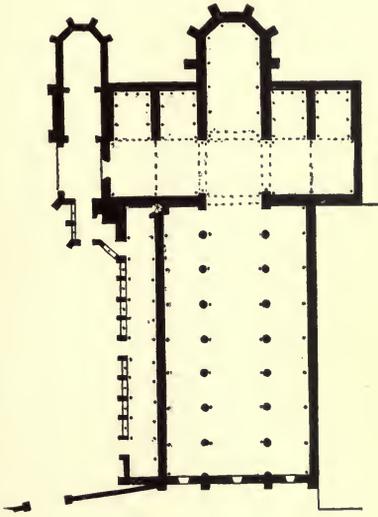
Date, A. D. 1187.

part of his life in the deviltries common to the lordly race, thought to expiate his sins by its erection and maintenance. As if to guard against any chance of the visitor being led astray by the wiles of a stray shot from the mischievous eyes of the nuns who still inhabit the nunnery, there is an iron grating between the nave and the cross transepts. A study of the plan shows that there is the usual nave, rich tran-

clerestory windows which are round-headed.

To those interested in the study of vaulting this church is full of interest. The vaults of the lantern, apses, transepts and one or two of the nave bays are different, and seem to show the influence of French study. Indeed, this is not singular, since nothing is more natural than that the Queen of Alfonso should be led to introduce the architect who had erected buildings for her father in Angevine. In my mind this fact is established by its very strength of character, which is far more scientific than the class of vaulting found in those examples which are known to have been erected under Spanish influence only. To me the French have always stood as the foremost builders of pointed work in every respect, and this idea seems to be borne out by all the noted examples of Gothic architecture in France or elsewhere. It is a noticeable fact that this class of building also does not extend far south, nearly all the best examples being near Burgos, Avila and Valladolid, and we are led to the conclusion, therefore, that they are due to the influences of prelates and priests, who brought with them the traditions and ideas of their French education. This fact is more clearly shown in several other notable structures all of about the same era. Tarragona, 1131; Lerida, 1203; Tudila, 1135, and Veruela, 1146. Of these, since the latter is an abbey church and of that class of ecclesiastical structures which added the picturesque features of a fortress as well as a home and a church, I shall speak more fully.

It is one of those beautiful old remains which the traveler loves to visit, away from the commonplace of a town, and nestling itself amongst the foliage of the country; a group of roofs and towers; sturdy walls with battlemented tops, from which a little town springs; the whole surrounded by shrubbery—beautifully picturesque. Away back in 1146 it was commenced, and in 1171 twelve monks crossed the Pyrenees in the dead of winter and took up their abode within its walls; they were Cistercian monks, and under the direction of Bernard, an Abbot of



Las Huelgas Burgos.

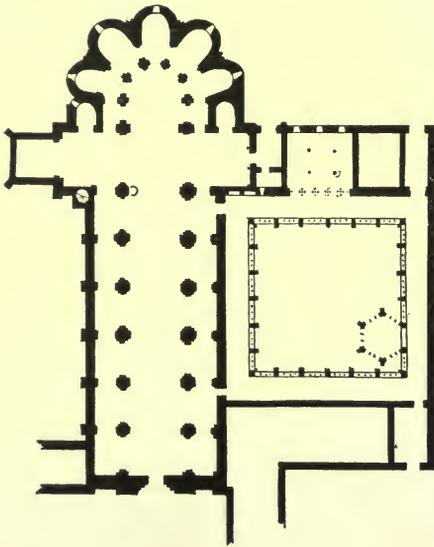
septs, square lantern and very deep central apse. Besides this in each transept are two square apsidal chapels. To the north is a porch with a beautiful wheel window and, of later date, the entrance. Beside the entrance is a high square tower with buttresses and pointed openings, above which is a balcony and beautiful open iron cage bell-supports. To the east are the high walls of the convent buildings with their cloisters to the west. The cloisters on the north are partly built in, but they show the original heavy buttress work the grained ceiling and the filled-in openings of pointed arch-work on their slender shafts. This cloister is of later date, however, as is shown by the fact of being built up against the window openings of the aisles. Still above are the

Scala Dei. One enters the outer walls through a round arch, and finds himself in a court, and before him is a tower, square and massive, and surmounted by an octagonal spire of later date. A thirteenth century archway gives entrance to the inner court, and before him is the old abbey church. The west front has a deeply recessed round archway, over which is a stone inscribed X P and A Ω; above, as if to give a touch of delicacy to the exterior, is an arcade on slender columns. The front recedes, and forms a gable whose rake was once arcaded, and the nave and aisles each have a circular window in the front. The interior is simple and massive, with pointed arches, and piers which are large and effective. The point that

secondary round arched openings, five in number, each supported by the singular plan of five slender shafts, and the interior is a groined ceiling supported by four single shafts. It is almost Moorish in plan. The cloister itself also is beautiful, the traceried openings being filled with alabaster panels, and the buttressheads capped with crocketed gables. Over the cloister is a second arcade in the style of the Renaissance, which is a detriment to the design.

Here, then, we find, on the whole, a very marked advance in planning over the earlier churches of which we have been speaking, and it leads on and on towards the grand cathedrals of later date, of which we shall speak in another article.

Leaving for a time ecclesiastical structures of this era, it is well to consider another branch of early Moorish art, which has given to Spain so much of interest. It will show that those old builders understood well the use of that good old compound of mother earth and water, which we call brick, and which has occupied the thoughts and hands of all mankind from the time of the Egyptians. Indeed, the Moors excelled in this class of work, as is shown by the large number of beautiful old towers that still exist, and which gives to Spain so much of its picturesque interest. We can speak of but one or two of them. At Saragossa is a beautiful example of this work in the tower of St. Paul, erected in 1259. It is an octagon in which great strength of design is shown by a high plain base, and the upper work in diaper. Each face of the octagon has a Moorish arch whose top is pointed, with double openings within the large arch, and above is a large rectangular panel of inlay, and still above a gallery, from which starts a smaller octagonal tower with a pointed roof, the whole filled in with glazed tiles of brilliant colors, which reveal the Tartan art to perfection. The influence of this tower is seen by the fact that when a later tower was to be erected the architect was surely influenced by it, for, in the Torre Nueva, we are treated to a finer and loftier one, of which I am enabled



Veruela Abbey

one notes in the interior is the apse which is large, and has an aisle around it with five apsidal chapels; on each side of the large apse is also an additional chapel, making seven in all, the two latter opening from the transepts. The ceiling is groined in stone, and the entrance of the chapter house forms one of the most beautiful effects of any early church in Spain. It enters from the fourteenth century cloister through



THE LEANING TOWER, SARAGOSSA.

to give a view. So high was it that a small settlement caused it to lean and necessitated a curious mass of brick buttresses at the base. This prevented its fall, but it is fully ten feet out of the perpendicular, a deformity for which the townsmen thank the Virgin, as it has made the town famous like Piza, and thus brings a few more visitors to enrich their coffers.

A study into the effects gained by the use of brick shows that while some of the work was either moulded or cut, the beauty was effected by the use of simple and massive forms, and a diaper work in which the bricks were either projected from the face or let into the wall. The bright Spanish sunlight not only brought out the design, but cast deep shadows which were sharp cut and well defined. The Christian builders caught the spirit of this art at once,

and thus many works are found, which although built in the Moorish era, are in reality of Christian origin.

In closing it may be well to speak of the Moorish tower best known to us at the present day, the Giralda tower at Seville. It was erected by Abu-Jusuf-Yakub in 1196, and is topped by a wind vane 14 feet high which turned (*que gira*) in its socket, and hence gave the name of the tower. It forms the prominent feature of the city, and in its purity was a plain shaft 185 feet high, by 50 feet square, with beautifully designed balconies and the side walls encrusted with panels of *ajaracas* diaper work in brick, each of a different design. The upper portion in rich open work, which is 100 feet higher, was added by Fernando Ruiz in 1568, but is of inferior design when taken in detail. On the whole, however, the distant effect of



LA GIRALDA, SEVILLE.

the tower is enhanced by the addition and is most enchanting. Seen at day-break the pale pink of the bricks brings out the panel designs which are strengthened as the sun rises ; at evening when the sun is falling into the horizon it looks luminous with the rosy light of the after-glow ; an hour later it pierces the sky, a silhouette, which starting with massive strength at its base runs up and up until it disappears in a point.

Charles A. Rich.





NEW YORK LIFE INSURANCE COMPANY'S BUILDING.

Chicago, Ill.

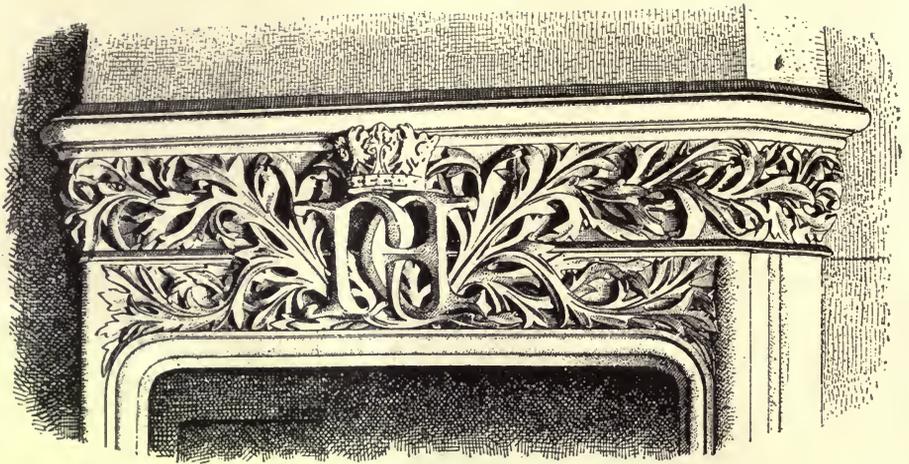
Jenney & Mundie, Architects.



New York City.

THE NEW CLEARING HOUSE.

R. W. Gibson, Architect.



THE ÉCOLE DES BEAUX-ARTS.

Third Paper.

THERE is little difficulty in accounting for the supremacy of the *École* over all other schools of art. To explain it one has simply to recount her methods of instruction.

First.—Most of the poor material is weeded out by the entrance examinations.

Second.—Advancement is determined not by time, but by results; the student's progress being gauged not by the number of years he has studied, but by what he has accomplished. Each one is left to walk by himself. The bright are not yoked to the stupid. The student passes from one grade to another not at stated times, nor in company with others, but upon the receipt of certain honors, singly, by himself, and prizes are offered to those who lead.

Third.—All the instruction is based on a system of competition, and the most intense rivalry exists not only between the pupils, but between the various *ateliers* and the *Patrons*. Every man knows just where he stands with respect to every other man, for the rolls are constantly revised and the call *en loge* arranged in the order of standing.

Fourth.—Architecture, and the same is true of her daughter arts, painting

and sculpture, is taught, not as is the case so often elsewhere, by men who have not achieved any great success in their profession, and who undertake to teach others what they have not been able to accomplish themselves; but by the greatest masters of the day, practicing architects, men of the highest distinction and ability; men who know themselves what they teach; men who are enthusiastically admired by their pupils; whose word carries weight. That such men should be willing to give up so considerable portion of their time to the cause of education, speaks volumes for the French character, and throws a vivid light upon the high state of civilization in that country.

Fifth.—The student himself is not in such a hurry to make money that he cannot afford the necessary time for an education. Nor are the conditions such as would permit of such a course. In France something more by way of qualification is required of an Architect than his simple assertion that he is one. A young man there, after spending a few months or years in an Architect's office, is not permitted to erect monstrosities, eye-sores as long as they stand, and a menace to public taste. In Paris few structures can be found which do not bear upon them unmis-

takable evidence of having been designed by educated architects.

Sixth.—Encouragement to effort is afforded on a more liberal scale than elsewhere. Besides numerous endowed prizes which are competed for annually and which are arranged in such a way that in contesting for them one may win honors and advancement in the school, even if not the prize itself, there is the *Grand Prix de Rome*, a prize foundation, which for dazzling attractiveness can only be compared to the prizes of the ancient Grecians; a prize which means to the winner not only great honor and advantages impossible to gain otherwise, but practically an assured future in life.

Such are the salient features which go to make the French school what it is, and every one is a surprise to the American.

Now, when to such methods are coupled the conditions that the student lives in an atmosphere of art, that he sees everywhere about him splendid examples of architecture, that he is constantly brought in contact with the greatest works of art in the other branches, that from the start many of his everyday comrades are men who have had years of training under the greatest masters, can one wonder at the results?

To compete every two months for several years under such men and in the midst of such surroundings as one finds at the French school, is to learn architecture under the best auspices.

It is often said that the teaching of the school is not of a practical kind; that the *projets* are for buildings such as one seldom encounters in real practice; that when the student receives his diploma after years of study he is entirely ignorant of the most commonplace duties before him, but the results do not justify the criticism.

The ordinary practical affairs of everyday practice can be quickly picked up, but what is taught at the school can be learned so well in no other way and in no other place. The principles taught there can be applied as well to the cottage as to the palace, for they are the principles of good taste. One is taught a knowledge of

the resources of the art, and mastery of its technique.

Her atmosphere is not congenial to the growth of sentimentalism, one hears little about the picturesque. The teachings of Ruskin and Turner are foreign to her methods. Her standards of art are of a higher type. Art is regarded as the highest effort of the intellect of man, the measure of his superiority over all created matter, and the human figure, the most beautiful work of the Almighty, is accepted as her canon and guide.

The evidence of the intellect of man in architectural design lies in the symmetry and logical disposition of the parts as shown principally upon the plan.

M. Charles Blanc reminds us that man alone of created beings can trace a geometrical figure.

The lesson of the human form as applied to such design is perfect symmetry to the right and left of the central axis and diversity from head to foot. On this principle has every masterpiece of architecture from the earliest record of man been conceived.

Success or failure at the school so far as the architect is concerned depends chiefly upon his ability to seize the *parti*.

This word *parti*, as used at the school, means the logical solution of the problem, and as every true architect must have two natures, the practical and the artistic, the *parti* must be the logical solution of the problem from his dual standpoint as constructor and artist.

The ability to grasp the right *parti* is a gift of nature, it can be acquired only to a limited degree. It is the characteristic of genius in architecture. Without this gift no man can ever hope to become a great architect.

A certain *parti* for the *projet* is taken by every student *en loge* during the twelve hours allowed for the sketch, but the *parti* as it is called, that is the *parti* par excellence or a solution which is logically right from the artistic and practical standpoint, is seldom taken except by the gifted or by the learned. If by the latter it conforms to the traditions of the school and is awarded a mention. If by the former

it shows originality and thought and the maker receives a medal or a prize, as the case may be. For originality which conforms to the laws of good taste, more than anything else, receives encouragement at the school.

As the *parti* is most clearly shown on the plan, the plan becomes the chief consideration, and upon it is lavished by far the greatest study and care.

For the same reason the plan is the chief consideration of the jury; it is scarcely an exaggeration to say that in making awards the plan counts for nine points out of ten.

Where so much attention is paid to the *parti*, architecture cannot be very bad.

The consideration of the *parti* militates against many things of which we in this country are fond. Where the *parti* is considered affectations disappear, for the design must conform to the dictates of reason. The same consideration makes it necessary to comply with the laws of health and convenience in structures to be occupied by man. Where the *parti* is considered people do not build miles upon miles of tenements lighted only at the front and rear, having slits—courts, so called, four feet wide, on which open all bedrooms, a menace alike to the health and morals of the community—buildings often occupied by twenty families on land barely sufficient for two or three. Rich men do not build country chateaux against the street lines of cities, nor do communities claiming to be civilized and refined make choice of barbarous styles of architecture, like the Romanesque, for instance, in which to express their aspirations.

To say nothing of the artistic considerations, the study of the *parti* saves to France millions upon millions yearly, for careless planning is one of the most expensive pursuits a nation can engage in and such planning is seldom found in France. The room thus saved is devoted to light and air. Paris is perhaps more densely populated than New York, but the buildings are properly lighted.

In Paris the *parti* of the city, too, is considered. One does not see there buildings of ten, twelve and even

twenty stories rearing themselves, monuments alike, to the greed of the land owner and the folly of the community which permits such blemishes on the beauty of the town.

The *parti* is always dictated largely by common sense; it wars against ignorance, vulgarity, waste and ugliness in architecture. Its characteristics are fitness, beauty, convenience, economy and reason.

Because we do not consider the *parti* we were surprised that the French did not admire the buildings of the late Chicago Exhibition; viewed from their standpoint in respect to the *parti*, they were a gigantic failure. In the opinion of France, America is the champion of progress. America is modern, America is free. Judge, then, of her surprise to find at the exhibition, which was to show to the world her progress and civilization, an array of buildings evidently inspired and often slavishly copied from French school drawings of ten, fifteen and twenty years ago. Buildings, too, which were precisely what they pretended not to be; illustrating nothing new in building and nothing new in art.

Having made the sketch and taken his *parti*, the student's duties henceforth, so far as the *projet* is concerned, lie at the *atelier* and with his *patron*. The system is a simple one. He goes to school, lays out his work, then takes it home to the *atelier* and completes it. Always providing, however, the *patron* consents. If the *parti* is too bad the *patron* will forbid his rendering or else advise him to boldly depart from the sketch and be placed *hors de concours*. On the theory that as he must lose in any case, it is better to do so with honor than ignominiously.

The relation between the *patron* and the pupil is a most intimate one. The very fact of the student's seeking admission to the *atelier* is an act of homage to the master, an assurance of sympathy and admiration on the part of the applicant. The *patron* takes an almost paternal interest in his pupils, and they on their part regard him with feelings of unbounded admiration. Their interests are the same, for the rivalry between the *ateliers* is not confined to the students alone. So close is the re-

lationship between the school and the profession that a man's reputation, at least among his brother architects, depends largely upon the work of his pupils.

To the pupil the *patron's* door always stands open. No matter whom else may be denied admission, the pupil, be he never so poor, is sure of a cordial reception. On such occasions the *patron's* manner is most charming, but at the *atelier* small time is lost on ceremony. At his stated visits he passes from student to student without word or sign of recognition. He examines the work and expresses his opinion in words impossible to misunderstand. Praise is sparingly used and seldom goes beyond the expression *pas mal*. Upon occasions he indulges in ridicule and when the case requires, words of biting sarcasm bring the blood to one's face.

The *patrons* of all the great *ateliers* are members of the Academy of Fine Arts, and as such serve on the juries of the school. At the judgment, the *patron* is always on hand as well to defend the work of his pupils as to see that other *ateliers* do not carry off more than their legitimate share of honors.

I have had no personal experience with the *patrons* of other *ateliers*, but of Monsieur Blondel I can give an account.

He is a man about forty years old, handsome, of fine physique and dignified bearing; he has a keen blue eye, which meets yours squarely. There is about him an air of manly decision well calculated to inspire confidence and the evident and kindly interest he takes in those of his pupils who are in earnest, soon wins for him their affectionate regard.

Wonderfully gifted by nature, he has besides at his command the resources of the most superb education in architecture which the Government of France can give. Moreover, he is a born instructor. He sees everything, forgets nothing, and decides with a precision and justness which excites the admiration of his pupils. He is as much interested in their work as they are themselves. Or at least he has to a remarkable degree the faculty of inspiring them with that belief. When he examines a design his eye takes in

everything. No moulding so fine that he does not regard its contour, no *point de poche* so small as to escape his notice. He is alike master of the noblest conceptions and the most refined detail.

His visits are the chief events of ordinary life at the *atelier*. As he enters a hush falls on the place which is not broken until his departure. As he approaches each student in turn, the latter rises deferentially and stands aside while the *patron* seats himself on a *tabouret*, and looks over the work.

At first I find these visits somewhat trying, for his criticisms are not complimentary. "Young man," he says, "this all looks old. I have seen that door in Verona, that window in Florence, that cornice in Rome. This is a compilation, not architecture but archæology. You are here to learn architecture, the noblest of the fine arts. It is not by compiling or copying even the greatest works of others that you can hope to succeed, but by learning to appreciate, and to apply the principles that guided the designers." Monsieur Blondel is severe, he does not realize that I came from a place where it is considered highly respectable and eminently proper not only to steal parts of a design, but to reproduce European buildings entire, and palm them off as one's own.

He passes to another *nouveau*. This young man has been working for several days, has encountered many difficulties and is anxiously awaiting his criticism; he gets it, but not in the way he expects. The *patron* glances at his work but does not deign to seat himself. He says, "You do not know enough to draw an axis"; then passes on. The lesson is short but not likely to be forgotten. The student has learned one of the fundamental laws of architectural design. Next time he will begin his work with the principal line.

How many practicing architects here and in England need to be taught the same lesson.

The next student has been *en loge* and shows him his sketch.

"What is that?" he says, "a church?"

"No, monsieur, a theatre."

"Oh! it's a theatre. Have you your mention in descriptive geometry?"

"No, monsieur."

"Devote your attention to that during the next two months."

In the *atelier* there are many strong men, members of the first class, logists and some who have already received their diploma. From these one learns scarcely less than from the patron himself, for they are ever ready to help and advise. They have spent years under the patron's eye and know his methods. It is interesting to see with what respect these men regard the master. His judgment is their final appeal. If they are masters of technique, he is past grandmaster. No man can do a thing so well but that he is ready to admit the patron can do it better. From the original conception to the finishing stroke of the *rendu*, the patron stands unrivaled.

Among the members of the *atelier* there is an intense *esprit de corps*, and a feeling of *camaraderie*. All work for a common end, the glory of the *atelier*.

If the etiquette of the *atelier* calls for small ceremony on the part of the patron, such is not the case among the students themselves. Each one as he enters is expected to go the rounds, shake hands with everybody, and inquire after his health and well being; an operation which at first I find somewhat difficult and expensive.

For instance, I enter and shake hands with the first man I meet.

"*Bon jour Flac comment va tu mon vieux.*"

"*Tres bien, merci,*" I answer, "*et vous.*"

"*Cinque sous d'amende pour Flac,*" shouts my friend, and the *sous massier* who has charge of the fine list writes five cents opposite my name. For in the *atelier* one must *tu-toyer*. Two or three days after I have entered I am fined five cents for hanging my hat on a certain peg sacred to the use of the patron. The enormity of the crime is explained to me by the *massier* himself, and I am warned that a second offence will meet with double penalty.

My own experience leads me to the belief that architects work harder than most other people, and I know that such is the case at the school. I have been at the *atelier* early and I have been there late; I have been there

Sundays, Christmas and other holidays, but I have never been there when some one was not at work. Not that the student's work is continuous, but when he does work he works.

As the first and second-class *projets* alternate, there are generally at the *atelier* men of leisure and men *en charette*. As the *atelier* is a pleasant place where one may always be amused, those who are not busy regard it as a sort of club and make it their lounging place. But their good nature seldom allows them to remain idle long. For the men who are rendering are always in need of help. One who is not busy himself, may be pretty sure of being asked to nigger for another. A man who works for another is called his nigger, and the one he works for becomes his patron.

Etiquette requires of a man who is a patron, to ask his niggers what they will have to eat at lunch time, which at the *atelier* is at four o'clock, and the nigger is expected to reply *petit pain*, which costs one cent. The patron often presses him to take a stick of chocolate in addition, which costs another.

Even these prices are sometimes heavy burdens for the students, many of whom are frightfully poor. When a boy in a village shows any talent for art he is often sent to Paris to study at the expense of the commune. There are many such at the school living on the princely allowance of 50 francs (\$10) a month.

Any description of the school would be most incomplete without some account of the *Grand Prix de Rome*.

The competition for this prize is the chief event of the school year, and to win it is the dream of every French student. The prize was founded by Louis XIV.

The Government owns the beautiful Villa Medicis on the Pincian Hill at Rome, and every year it sends there from among the students of France one architect, one painter, one sculptor and one musician, and every third year one engraver. These young men are selected by competition and each is supposed to be the most promising in his respective profession.

They remain five years, and can stay in Rome or travel as they see fit. For their personal expenses they are allowed a salary. During their stay they receive every advantage which the French nation can give to perfect them in their several callings, and each year they send back to Paris samples of their work. When they return they receive government patronage. To a great extent their reputation is made and their future in life assured.

The prize is open to all Frenchmen under the age of thirty, but no man can hope to win it who has not had long training at the school. The knowledge of technique alone necessary to the handling such problems as are given requires years of training of a kind only to be had at the *École*.

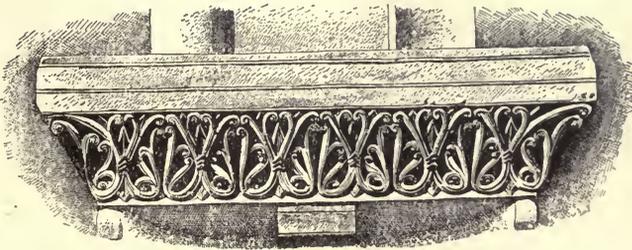
The award in architecture is made after a series of three competitions conducted on the weeding-out principle. The first, open to all comers, who comply with the conditions of age and nationality, is generally participated in by several hundred. The programme calls for a somewhat simple problem shown by a sketch to be completed *en loge* in twelve hours. From these the jury selects forty which are the best, and to the makers are given the second programme, which is for a building of more importance, the design to be made in one session of twenty-four hours *en loge*. The ten who acquit

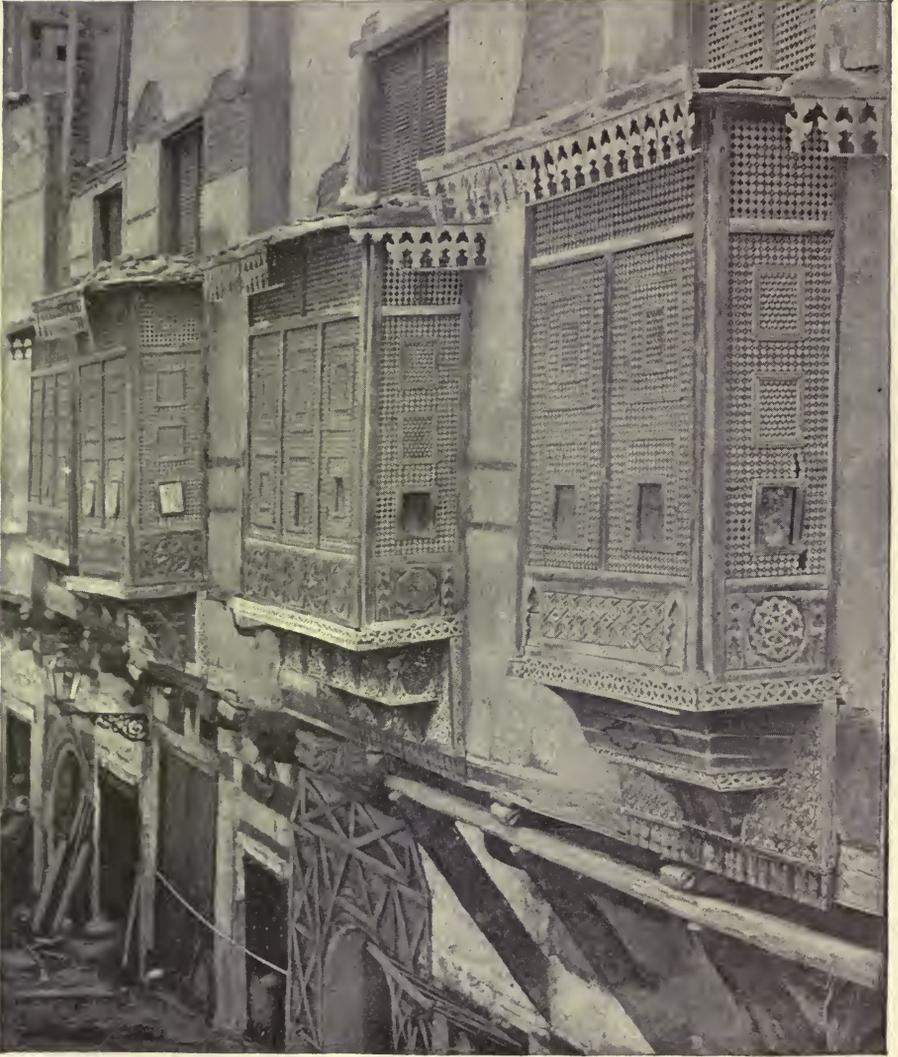
themselves best at this trial are allowed to undertake the final problem.

To arrive even at this stage is considered a high honor, and these ten men are known ever after as logists.

The final programme always calls for a building of the most magnificent proportions and the drawings are often as large as the side of a small house. For the sketch a single session of forty-eight hours is allowed *en loge*, during which time the contestants are locked in and are allowed to communicate with no one except the guardian who gives them their food. If they sleep, they do it as best they can on the drawing boards or on the floor. For the finished drawings three months are allowed, the work being done *en loge*. No books or documents can be used, but they are allowed the advice of their patrons. The sketch of each man is hung up in his *loge*, for reference, covered with a sheet of tracing paper, sealed with the seal of the school. Like the ordinary *projets*, the *parti* must be adhered to, but changes in proportion and detail may be made. To the winner all sorts of honors are accorded by his brother students, including a triumphal procession and banquet. His silhouette in the *atelier* is decorated with laurel and palms, and his name becomes one of the chief trophies of the place, and a title of distinction to the *atelier*.

Ernest Flagg.





WINDOWS IN CAIRO.



ARCHITECTS' HOUSES.

Part IV.



AVING built our house we proceed to decorate it. There was a time when decoration of ordinary houses was unknown.

Public buildings or palaces might be decorated, dwellings of people in general were not. Fresco or whitewash, nothing between.

It is not to be denied that the very bareness of a rough room has its charm which is apt to be lost by deliberate adornment. Who does not know the fascination of the country-house garret, with its sloping rafters ending in mysterious, dark, triangular nooks and its pleasant, garretty smell of dry pine? Who does not feel the romantic spell of the country barn, with its rough-hewn ties and braces and the sawed-off beam ends of the half story over the horse stalls, above which the hay is stowed, forming a rustic clerestory to

the central nave where the high hay loads drive into the great doors?

Even in the cellar of either town or country house there is a pleasure in the proximity of the stone and brick that is not found in more sophisticated surroundings. The charm of contact with the very construction itself is indescribable, and akin to the indescribable charm of contact with nature itself, with the sweet earth and the moist dew and the cool darkness.

This charm the best decoration adds grace to without destroying it, as the best landscape gardening, no matter how formal the style, adds grace to the natural charm of nature, or as the best architecture, again, no matter how formal the style, intensifies the beauty of the natural surroundings by which it is itself in turn adorned, as a choragic column on the slope accentuates the heights of an acropolis.



From the *London Builder*.

DESIGN FOR HALL INTERIOR.

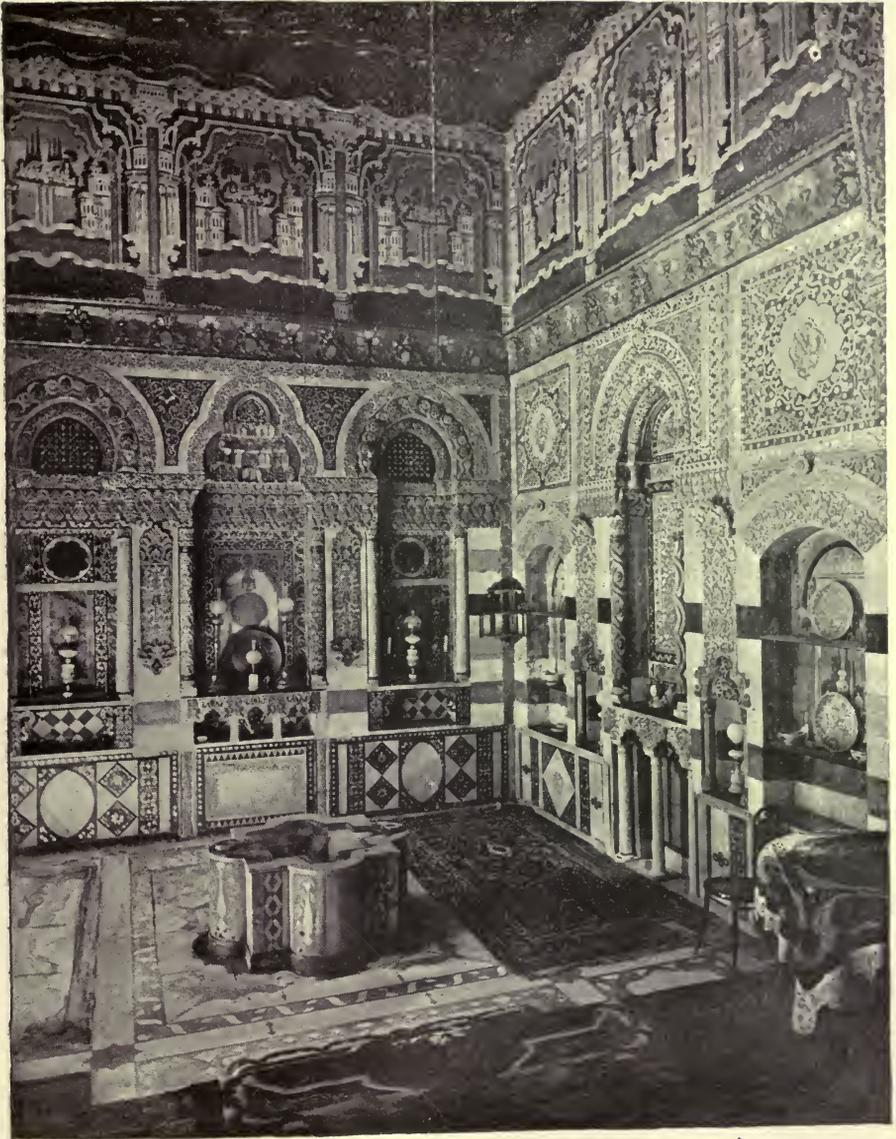
J. Armstrong Stenhouse, Designer.



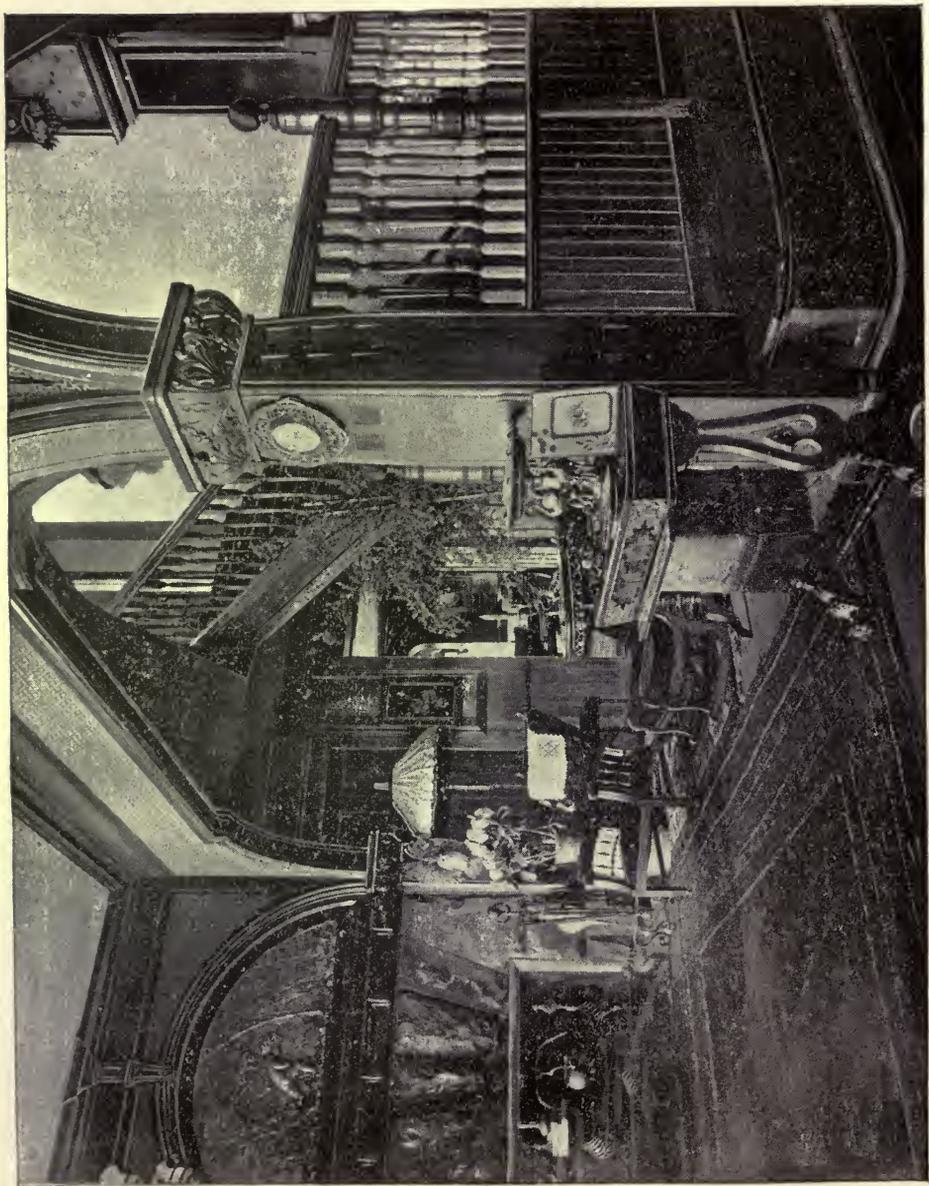
No. 3 Rue Jean-Bart, Paris.

DRAWING ROOM.

Edm. Guillaume, Architect.



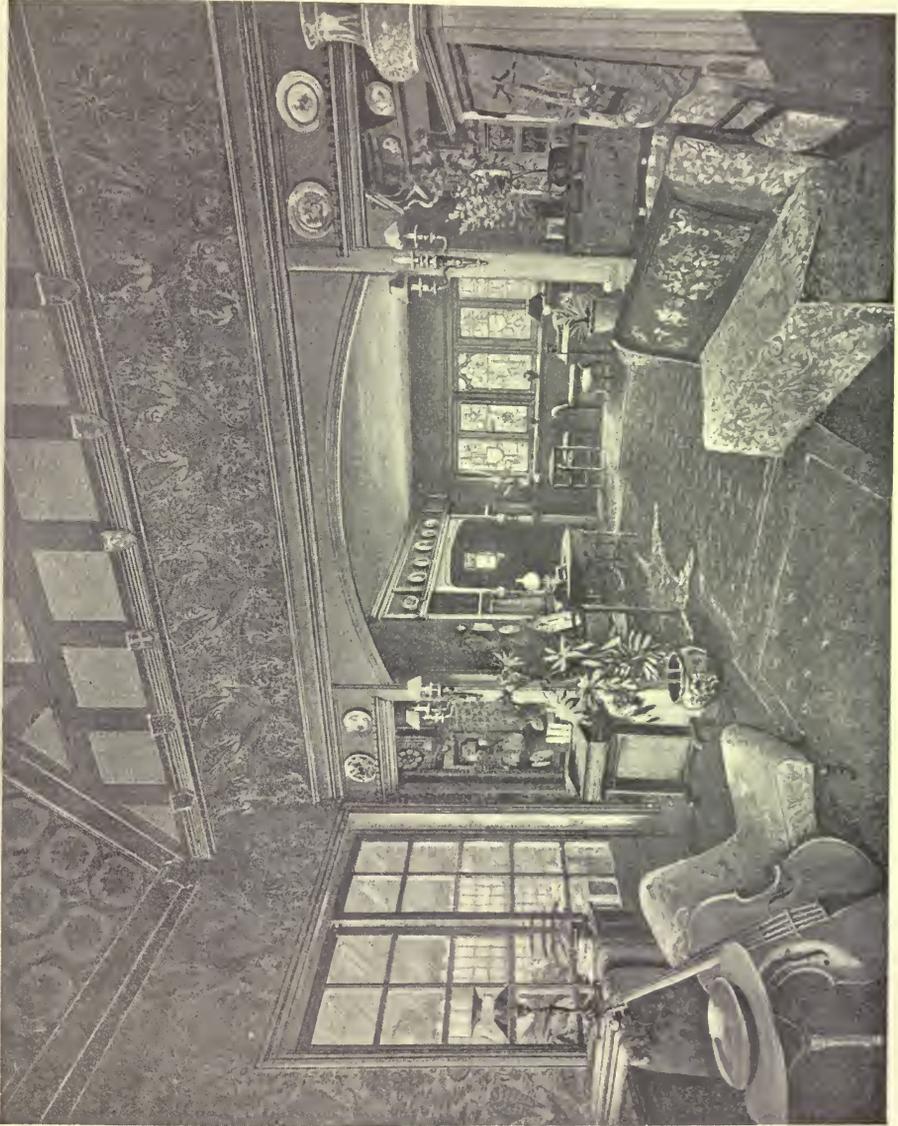
AN INTERIOR IN THE HOUSE OF THE ENGLISH CONSUL, DAMASCUS, SYRIA.



Ardmore, Pa.

HALL IN RESIDENCE,

Geo. C. Mason & Son, Architects,

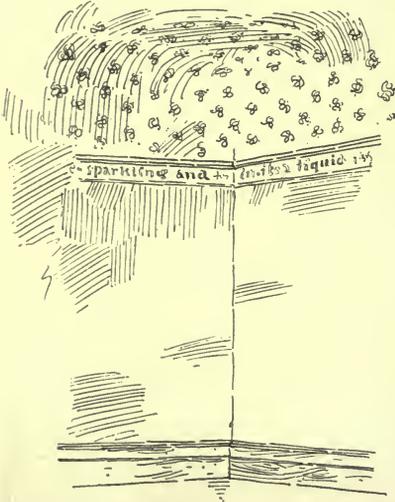


THE DRAWING ROOM, REDHOLM.

John Belcher, Architect.

quired. The ordinary height was at first determined by the wainscot, which naturally was carried to the height of a chairback; the intention of wainscotting being, not ornament, but to clothe the part of the wall more likely to be damaged in a material fitter to withstand rough usage. A foot and a-half or two feet for rooms from nine to ten feet high is a better proportion; and, if a wooden wainscot is wanted, is easily executed with simple mouldings, as shown in the illustration, instead of the much more costly paneling.

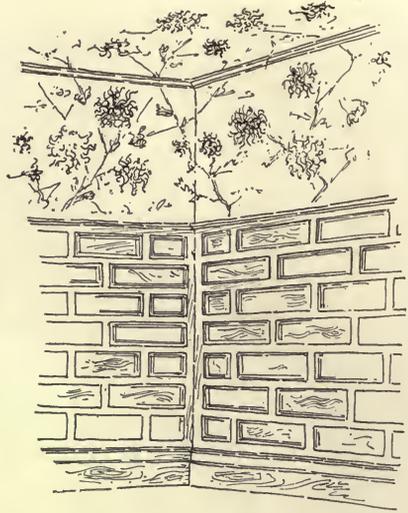
Often, instead of, or in addition to a frieze, a simple cove at the angle of the ceiling gives the happiest results, especially where the room is somewhat



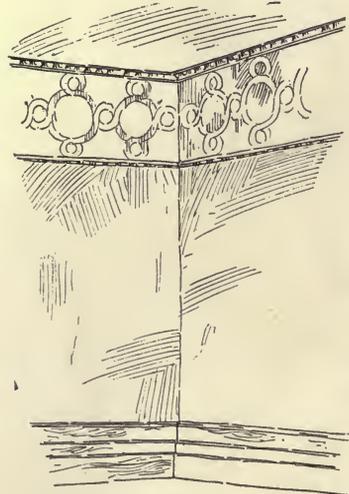
Wall treatment with cove wall in plain color, cove and ceiling lighter, with stencilled pattern.

small and a more spacious effect is wanted. It might seem at first thought, as if the opposite effect would be produced, as if the moulding at the spring of the cone, some two feet lower than it would be at the ceiling, would make the room seem more contracted rather than more spacious. In execution, however, the eye does not gauge the real height of the coved ceiling. The springing point is plain enough, but how high it goes above that is not at once evident. The effect is somewhat like that of a dome, soaring and unlimited. In more pretentious work a very satisfactory domed appearance is obtained

where the rise is really very slight. A flat dome, over a theatre for instance, of only five or six feet rise for perhaps thirty or forty of span, will give an



Double division of wall, wainscot six feet high, dark oak. Frieze and ceiling cream white, with colored chrysanthemum border.



Triple division of wall. Dado two feet high, moulded wall and ceiling in plain color. Ceiling and frieze a lighter color, with simple pattern on latter.

effect hardly distinguishable from that of a hemispherical dome.

Instead of the triple division, plinth, wall and frieze, the high dado with broad frieze placed immediately upon it is often advisable.

Especially where the dado can be done in a wainscoting of paneled wood-work is this arrangement satisfactory.

Just what division and treatment shall be adopted depends upon many circumstances. The proportions of the room, and the direction in which they ought to be corrected to the eye; the uses of the room, its aspect, the character of the occupants, not their moral character, but their social involvement

is used throughout the house. In addition to this some plaster mouldings have been formed at the top of the wall, and often nothing more is done. If anything more is attempted one of two things occurs: either the owner takes the painting and papering in hand, goes to a store, picks out the paper himself, or more frequently, herself, and has the walls papered, the ceiling and cornice colored according to



No. 4 Prince's Garden, 

REAR DRAWING ROOM.

E. P. Warren, Architect.

and individual tastes, and, not least in importance, the money to be spent.

With regard to the ordinary details of interior work, there is much improvement possible and desirable.

The usual thing is to have the wood-work, the architraves of doors and windows, the base and picture mouldings and the doors themselves, made after the design furnished by the architect, and very often the same pattern

her own ideas. When she is a woman of taste, and few women are devoid of it, their practice in matching dress-goods gives them a delicate discrimination of color, and their practice in dress-making is no bad training in color arrangement, the result is sometimes admirable.

But if, without interest or taste or time, the owner buys what first comes to hand, or what the salesman com-

mends most loudly, there ensue the painful failures that we sometimes see.

The other way is to hand over the house to professional decorators, who do their work with admirable skill, but at an extravagant cost. They are apt to remove the "trim" that the architect put there, not because it is not good, but because they want to have different kinds in different rooms. They put up plaster and wooden mouldings, and papier-maché scroll-work and powderings. They scheme a mirror here and a gas-bracket there. They canvas, and tapestry and paint and paper and gild, and end by laying beautiful hardwood floors everywhere.

Excellent work and excellent taste they provide, many or most of them, but the bill is apt to be high, higher usually than the ten or twenty per cent that the architect would charge, but as the charge for designing is merged in a lump sum the owner does not realize how much he is paying for skill.

It is because of the excessive amount of heterogeneous detail involved in this interior decoration that the business of a decorator has sprung up. The architect could do the work as well or better, but the amount that he must charge must be considerable or it will not pay him to undertake it. Imagine the continual alertness, after the design is settled and the drawings finished, that is required to select the fire-place tiling and have the brick-work made to fit it, and the mantel made to fit that, and the mirror, that must go into its place before the carved frame can be screwed on, is ordered, and the order filled, and the wrong size sent by a blunder

returned, and the right-sized plate sent in time; and the fire gilt mouldings that the maker expects a new stock of every day, having sold the lot that we engaged to somebody else, and the tapestry painted, and the curtains embroidered, and the ceiling leveled, and the gas fixtures designed and ordered, and fifty more minute matters, which anybody not in the business would not even understand the statement of, such as whether a moulding shall be coped or mitred, this is the business of a decorator. It is this very character of it that has made it a frequent practice to charge the designing and looking after the work together with the doing it in a lump sum, which distinguishes the decorator from the architect, for the latter designs and looks after work but does not take the contract for the execution of it.

But it is probable that if owners would pay an adequate amount, and what would seem very probably an extravagant proportionate amount, to an architect for designing and looking after the decoration, that the total cost would be much less than in any way that would obtain the same result.

For all ordinary unpretending houses of moderate cost there is nothing more generally available than wall-paper for both walls and ceilings. A few years ago admirable designs were made, in fact the designs were generally so good that it was hard to go wrong in selection.

The custom of the wall-paper trade, however, requires that new designs shall be made every year and that the printing rollers and blocks for the



"ASHCROFT."

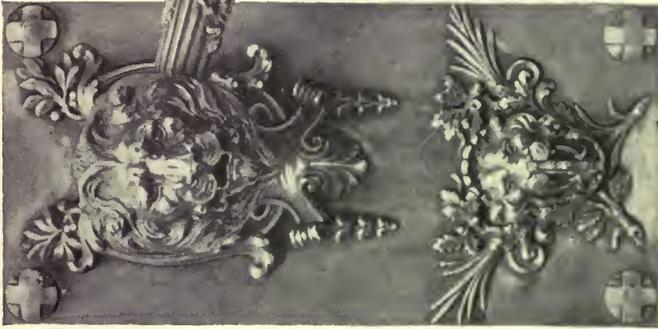
Wm. F. Unsworth, Architect.



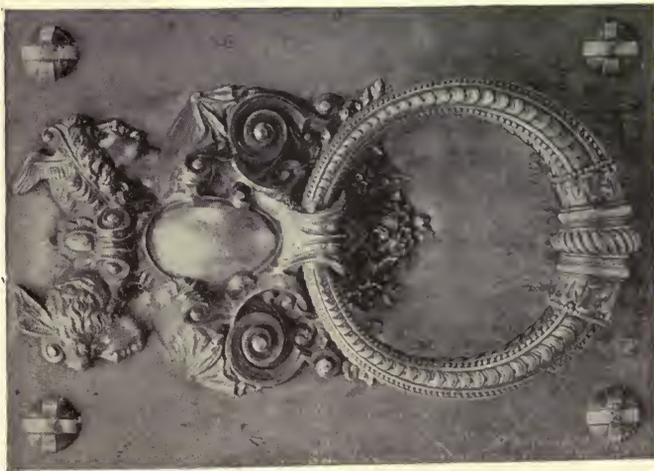
DOOR IN HOTEL GARIZOT, RUE ST. LOUIS EN L'ISLE, PARIS.



KNOCKER, HOTEL DE CHALONS AND DE LUXEMBOURG, PARIS.



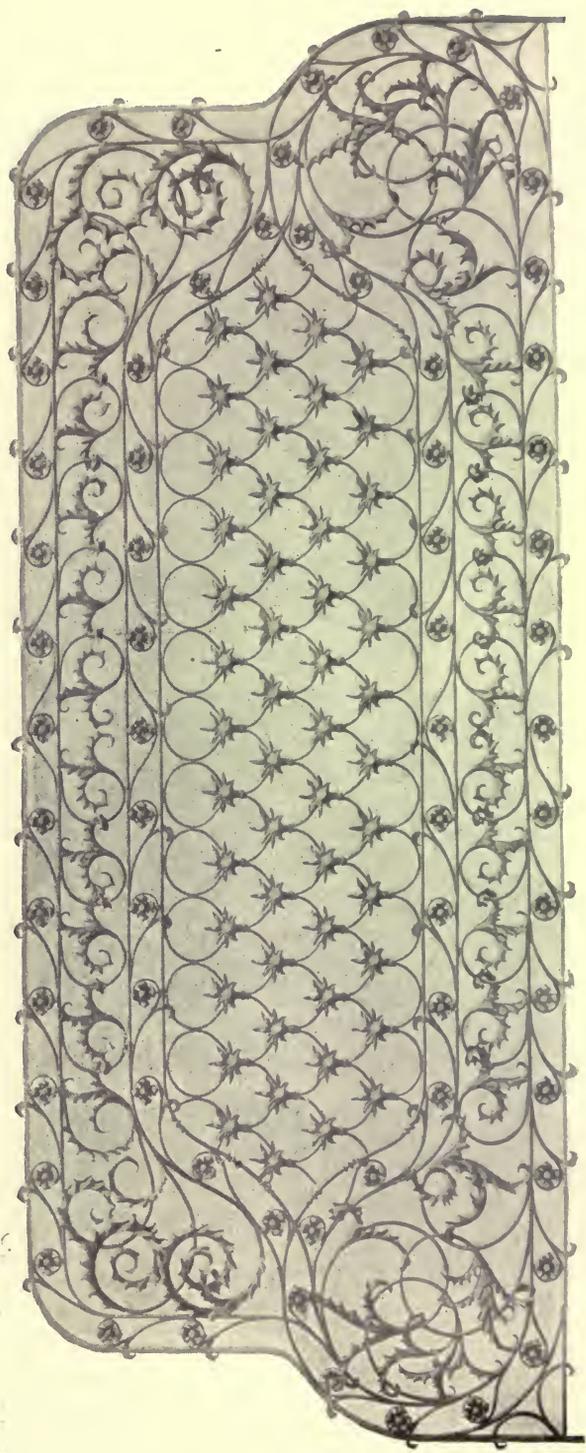
DOOR PLATE.
Executed by A. G. Neuman.



DOOR KNOCKER.
Designed by Wm. E. Greenawalt.



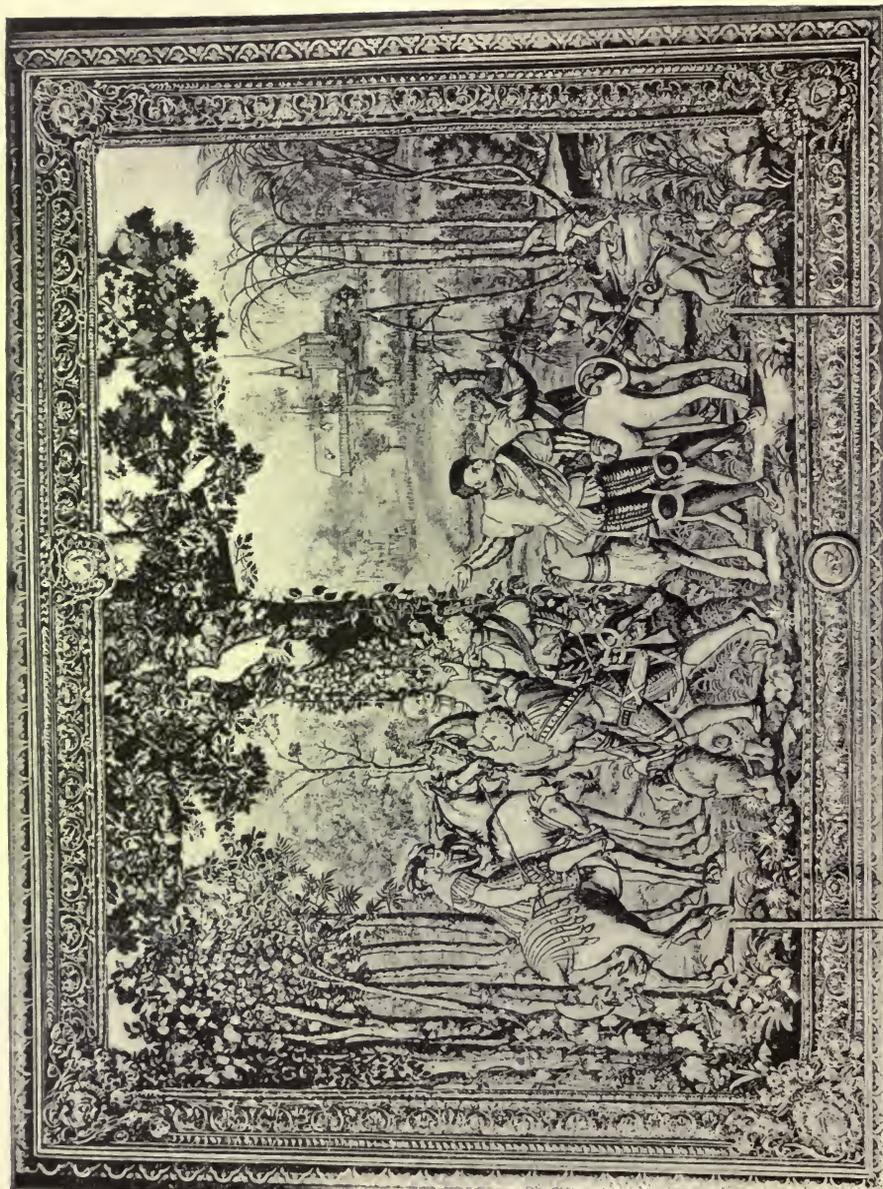
McKim, Mead & White, Architects,
IRON BALCONY OF METROPOLITAN CLUB, NEW YORK CITY.
Designed by Jackson Architectural Iron Works.



Designed by Jackson Architectural Iron Works.

IRON GRILLE IN DECKER BUILDING.

Alfred Zucker. Architect.

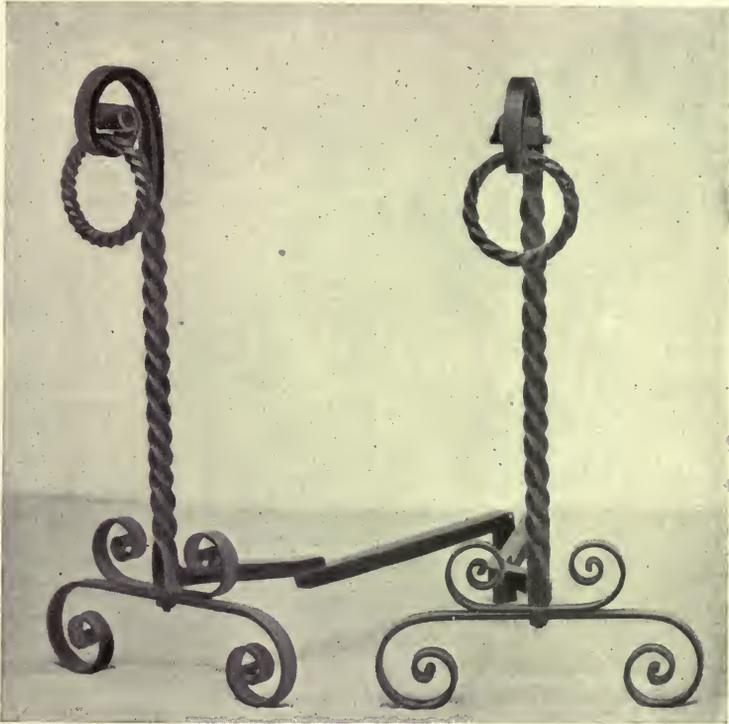


GOBELIN TAPESTRY IN DINING ROOM, CHATEAU DE CHANTILLY.
Made by Jean de la Croix (about A. D. 1685).

former designs shall be destroyed or discarded. The result is that wall-paper designers are under undue pressure to produce vicious novelties, and the character of wall-paper design has relapsed into the old magenta-roses-and-brown-leaves style, mere thoughtless collocation of naturalistically-drawn objects, offensive to good taste as would be a landscape painted on a floor.

design, but we are perfectly certain that after January of next year we shall never be able to get it again.

In my own house I have a paper of fairly good design, but peculiarly suited the room in which it is used, so much so that visitors usually exclaim at the excellent effect. It is disgracefully dirty from long service and must some day give way to an ordinary, ugly paper, for no amount of money can



Andirons, designed by E. A. Jackson & Bro.

In the very expensive papers better designs may be had, but not easily at any price.

It is hard to know what to do in such a state of affairs. The material that is most convenient and most beautiful if at all well designed rendered quite useless by an unnecessary relinquishment of good designs and a wanton substitution of bad. Add to this that if we succeed in getting a good design we are not only not sure of being able to replace it with more of the same

obtain paper of the same design now.

Probably the safest thing is to use only the paper of a solid color without design of any kind. These are the well-known and admirable cartridge papers, so called, but I presume before long these, too, will be unobtainable. They are somewhat more expensive to put on the wall than other papers of the same cost, as their stiffness renders it difficult to make them stick unless the walls are first papered with a thin

underneath layer of paper — lining paper they call it.

So if we do take refuge in plain color we may do well to consider paint of



Lantern, designed by Wm. H. Jackson & Co.

some kind. The simplest and cheapest is what is called kalsomine, really a water-color paint with a body of whiting mixed with water and glue and whatever colors we may choose.

This kalsomine, from an artistic point of view, is excellent. The very nature of it precludes very violent effects. You cannot get a strong vermilion, nor an emerald green, nor a dead black, nor any such atrocity in kalsomine. The abundant admixture of whiting precludes such colors.

If we yield to the nature of the material and do not attempt to more than tint the ground white we can obtain delicate shades of reds, browns, yellows and colder colors, softened by the slightly "chalky" kalsomine effect.

The great defect of kalsomine is its perishability; the slightest spot of water makes a mark that cannot be removed. For a house full of children this makes kalsomine quite out of the question, and it makes it unsuitable also in the kitchen, bath-room or anywhere else where it may encounter hard usage. Sometimes, too, there is complaint that kalsomine rubs off, but this is certainly not always the case with it. I think that there must be a deficiency of glue if it is found to rub off.

There are several alleged improvements upon kalsomine in the market, none of which have I used, but which are well spoken of; quite unaffected by water they are said to be, and are well worth a trial. One rather interesting variety I do know that has the advantage of not being patented. An excellent paint for walls can be made by mixing the powdered color with ordinary milk to a consistency suitable for applying. This gives a dead even surface like kalsomine, but the albumen and fatty constituents of the milk make the surface proof against water spotting.

Oil paint is not usually satisfactory in appearance. Differences in the hardness of the plastering are apt to cause differences in the absorption of the oil and of the texture of the paint.

The choice and disposition of coloring is undoubtedly the most important part of decoration. By good color that which is intolerable in shape may be made almost agreeable, while what is excellent may by bad coloring be quite spoiled.

So delicate and intricate, too, are color effects that nothing but the instinct of an artist's taste can give the most successful results, aided by all the training that a lifetime can hold. Yet there are some suggestions that may be not without value.

All coloring is classified by artists, and by those who are not artists, when they think about it at all, as "warm" and "cold." Even house-painters habitually use these terms. All reds and yellows, and mixed colors, browns, grays and such, in which red or yellow predominates, are called warm. Those in which blue predominates are called cold.

In a general way it is safe to put "warm" colors where you want a suggestion of heat, in rooms that have only a north light for instance, or in

streaming in; in summer cottages, and all rooms that one likes to think of as especially airy and cool.

But all this gives no inkling of the innumerable shades and mixtures of delicate tints among which we may choose. Shell pink and cardinal red and burnt sienna are all warm but so totally different that the mere grouping them as warm will help us little in selection.

Another very important practical matter is the coloring of contiguous rooms, so that the glimpses of adjoining rooms, seen through open doors, may form an agreeable combination with that of the room we are in. One artist's house I know of where the entrance hall is red, the parlor beyond yellow and beyond that the dining-room blue. Seen altogether through wide openings, the effect is charming.

Bear in mind that by red I do not mean an even brick red—perhaps a reddish gray ceiling and walls with terra-cotta colored hangings and a rug in which the inimitable Oriental reds predominate. Talking of rugs and coloring for a moment, did you ever notice how dull the best coloring is and yet how brilliant? Compare an Eastern rug with an American-made carpet and you will find the brilliancy of the separate colors of the Connecticut affair far exceeding that of the Eastern product, yet they look thin and poor, while the rich dull reds of the foreign product, the whites that are never white, the blacks that seem to be green and blue and all sorts of colors, fairly glow in their combination.

It is so too in good paintings. The most brilliant colors seem dull if we compare them with the pure pigment just squeezed from the tube, but they stand out like jewels amid their surrounding colors.

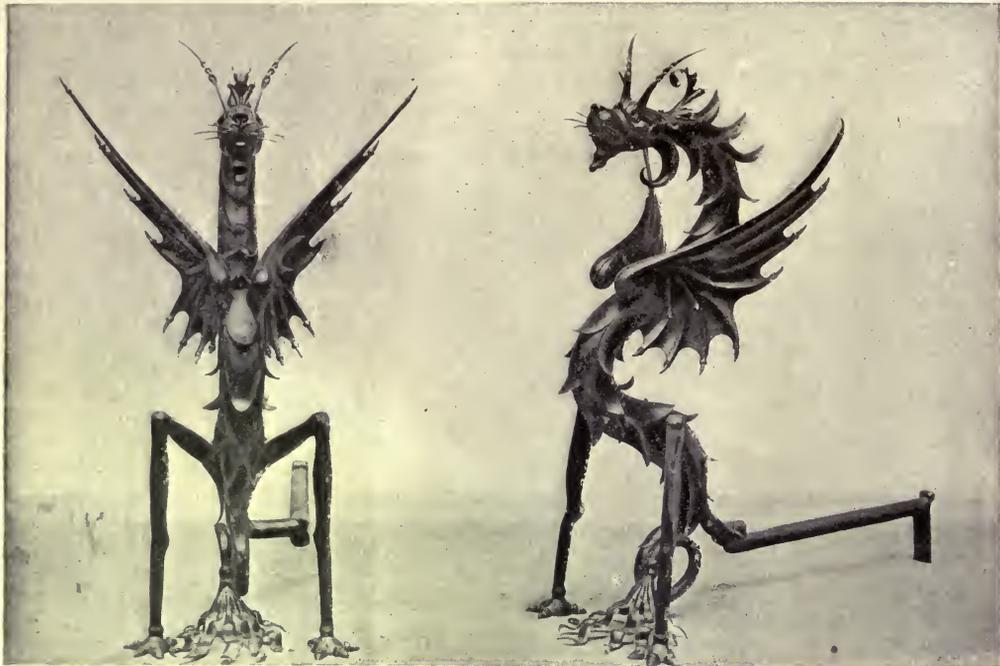
Bear this in mind in decorating your-



Fire Set, designed by E. A. Jackson & Bro.

rooms that are to be especially cosy and inviting in winter, but not used so much in summer.

Put "cold" colors on the contrary in the rooms that are well lighted with a south light and with plenty of sunlight



Andirons, designed by E. A. Jackson & Bro.

house. Abjure the colors which delight the eye in themselves, the clear blues and the bright reds, and pick out those which seem not so attractive in themselves. They will be quite bright enough on the walls and floors. In making a blue and white room, for instance, a blue-gray is quite strong enough for the broadest wall tints.

Brighter blues, but still never pure color, may be used on the mouldings and beadings of the white woodwork and they will seem all the more brilliant from the proximity of the more subdued color.

For small, simple houses where plain flat colors are to be used upon the walls, there is a scheme which is very generally satisfactory and never offensive. It is to make the walls of one tint and the frieze and ceiling a lighter tint. In the broken red that is called terra-cotta color, in brownish yellows, and almost all other subdued colors, this arrangement gives good simple effects.

The custom of the day regards hardwood for the doors and for all of the

interior woodwork as much to be preferred to painted finish. In durability no doubt oak surpasses pine, and for some purposes, as for the steps of stairs, where the unavoidable use is sure to deface paint, hardwood is most suitable. But for color effects painted woodwork for ordinary houses has an advantage over hardwood.

In more elaborate houses, where we can choose from a long list of hardwoods, without much regard to cost, we can find those which will suit almost any color arrangement.



The cream white of satin wood, the warmer tone of prima vera, the inimitable sienna color of unstained dark mahogany, the purple of amaranth wood, all are to be had if we pay for them. But in modest houses these are out of question, and I confess that the color which is attainable by painting outweighs in my opinion the more utilitarian advantages of the more costly material.

black, but a little grayish, and contrasted and at the same time harmonized well with the other color. The portières and tablecloth were made of dark blue horse blankets with black borders.

Hardly anything is more destructive of unity and beauty of design in interiors than the almost universal custom of hanging up pictures of all degrees of atrocity and in the most as-



MANTELPIECE.

Designed by William H. Jackson & Co.

The results that can be obtained with painted woodwork are often admirable.

One room I remember, the ceiling gray and white, the walls blue and white—both made of paper-hangings. The effect would have been nothing if it had not been for the woodwork, the doors and window lines with a baseboard and picture moulding. These were painted a plain dead black, which being a dead black, and not a highly-polished "ebonized" black, was not too

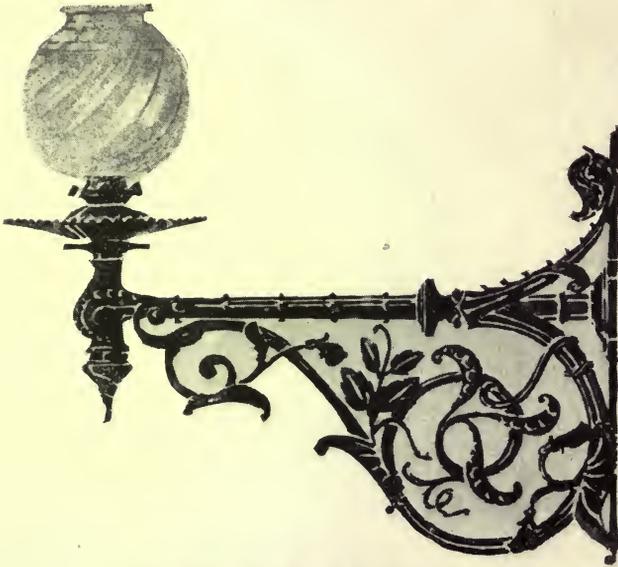
sertive frames imaginable. These were indeed, when they came into vogue, themselves the only wall decorations, invented to partly cover and partly distract the mind from the melancholy white walls. But, used as decorations, pictures are not to be commended. They are distinctly furniture and must be used as such, each having merit and interest of its own to justify its existence.

Nothing can be more charming than perhaps unframed sketches, even though not by a master hand, standing

upon shelf or table ; or well considered paintings or drawings, or heliotypes or photographs, perhaps of Venetian views or Alpine scenery, but always of something that is emotionally pleasing, in broadly designed frames, and in not too great profusion, indeed rather sparsely hung on the walls.

Next to the wall treatment in importance is the matter of hangings, door curtains, or portières as we have almost adopted the word, and window curtains. As in the case of wall papers, but not quite so completely, the excellent designs of a few years since are all but extinct. The simple striped pat-

any means. It is a linen material, a sort of linen velvet, although with a shorter pile and a thinner material altogether. Besides it has a fine cord, not more than a quarter of the width of the cord of corduroy. That it is of linen gives it a sheen almost like raw silk, and it is made in very soft, quiet colors. It wears well and makes good furniture coverings, besides being flexible enough for hangings and forming good folds. There are, too, figured reps made in colors not so vivid as the conventional ecclesiastical red rep, good for wall coverings, but not for hangings unless lined.



FRENCH DESIGN FOR ELECTROLIER.

terns, sold under the name of Turcoman curtains, or in lighter cotton materials, are no more to be had, and the other simple and good designs have vanished. In a few materials, Madras for instance, stripes can still be got ; otherwise we are reduced to the floral displays of the wall papers in textile materials as well, except in the very costly kinds, and even in these the tendency is toward the renaissance of former days.

As before we take refuge in plain materials, of which one of the most generally useful is what is called velours, although it is not velvet by

For floors nobody thinks now of using the old-fashioned carpets, although when from any cause they must be used it is as impossible as ever to get an artistic design. Still it is so rarely necessary to use them, that it is hardly worth taking time to abuse them. Floors of boards, of better or worse quality, with some kind of rugs are quite generally used. What to do with the boards themselves is a question that has not yet found a perfect solution. If we varnish them, even with the hardest of varnishes, they will show every scratch, each snapping spark will leave



MANTELPIECE.

Designed by William H. Jackson & Co.

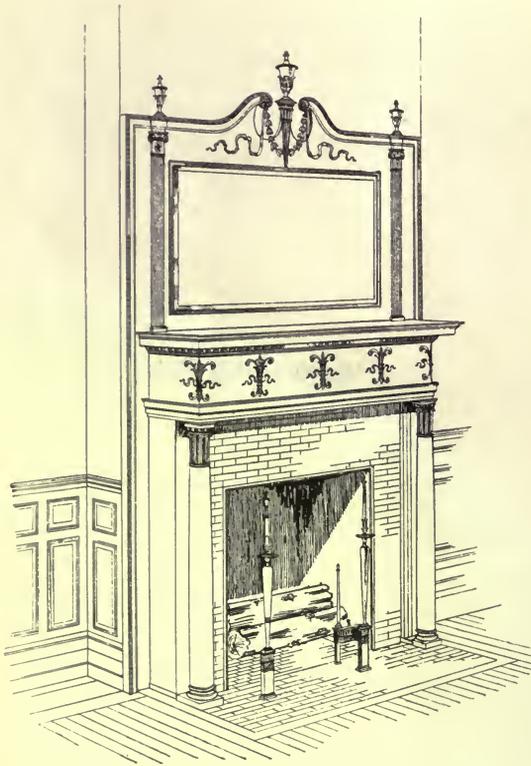
its ineradicable white mark, and chipping and blistering is often encountered which no revarnishing will obliterate. Besides this the gloss given by a varnish is not quite the best possible. It has an air of superficiality, of too much glossiness, without transparency or depth. The other treatment, the only other available treatment, is with some of the wax preparations that have to be polished.

This polishing is their chief drawback. It has to be done the more frequently the more we want a brilliantly polished floor, yet the advantages in the way of improved appearance and invulnerability to scratches are so great that it is the only thing to recommend.

As for the rugs we are to put upon

the floors, let them be, if at all possible, of some Oriental make, of some of the Persian or Turkish provinces. What are called Japanese rugs are merely of ordinary American make with fantastic devices supposed to be Japanese. If we must confine ourselves to domestic rugs there are some really excellent ones of jute. They have a silky sheen and are in quiet colors and good designs, usually rather light in general effect.

If carpets must be used, and in rented houses, where the floors are bad, we are sometimes compelled to use them, beware of almost everything that is usually done. Let the design be very retiring and inconspicuous; there would be no objection to conspicuous designs



MANTELPICE.

Designed by Davis, Reid & Alexander.



A comfortable dining chair.



An uncomfortable chair.

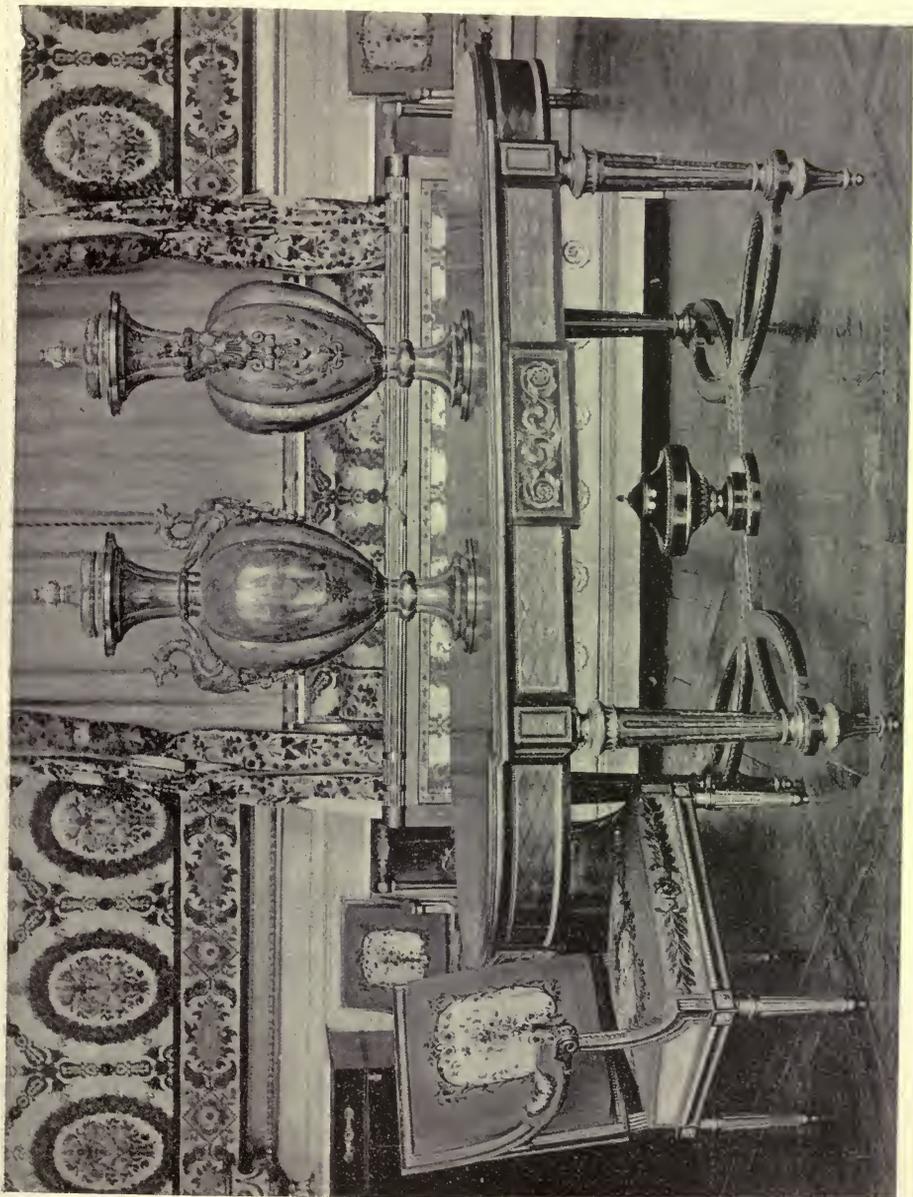
if they were good, but such are hard to find. Avoid all the black medallions with loud bunches of flowers that are sold in such quantities, and take refuge if need be in the plain colors that are the resource of the hopeless. Be careful about borders. Nothing diminishes the apparent size of a room so much as a border to a carpet. Narrow borders that keep themselves out of sight behind furniture, are not so bad, but when a border is wide enough to be seen the eye inevitably sees the space inside the border as the gauge of the size of the room.

One of the best coverings for a bad floor is ordinary Chinese or Japanese matting. It is cleanly and easily kept in order, in summer it is just the thing alone, and in winter it forms an excellent background for rugs. Its cheapness causes it to be underestimated.

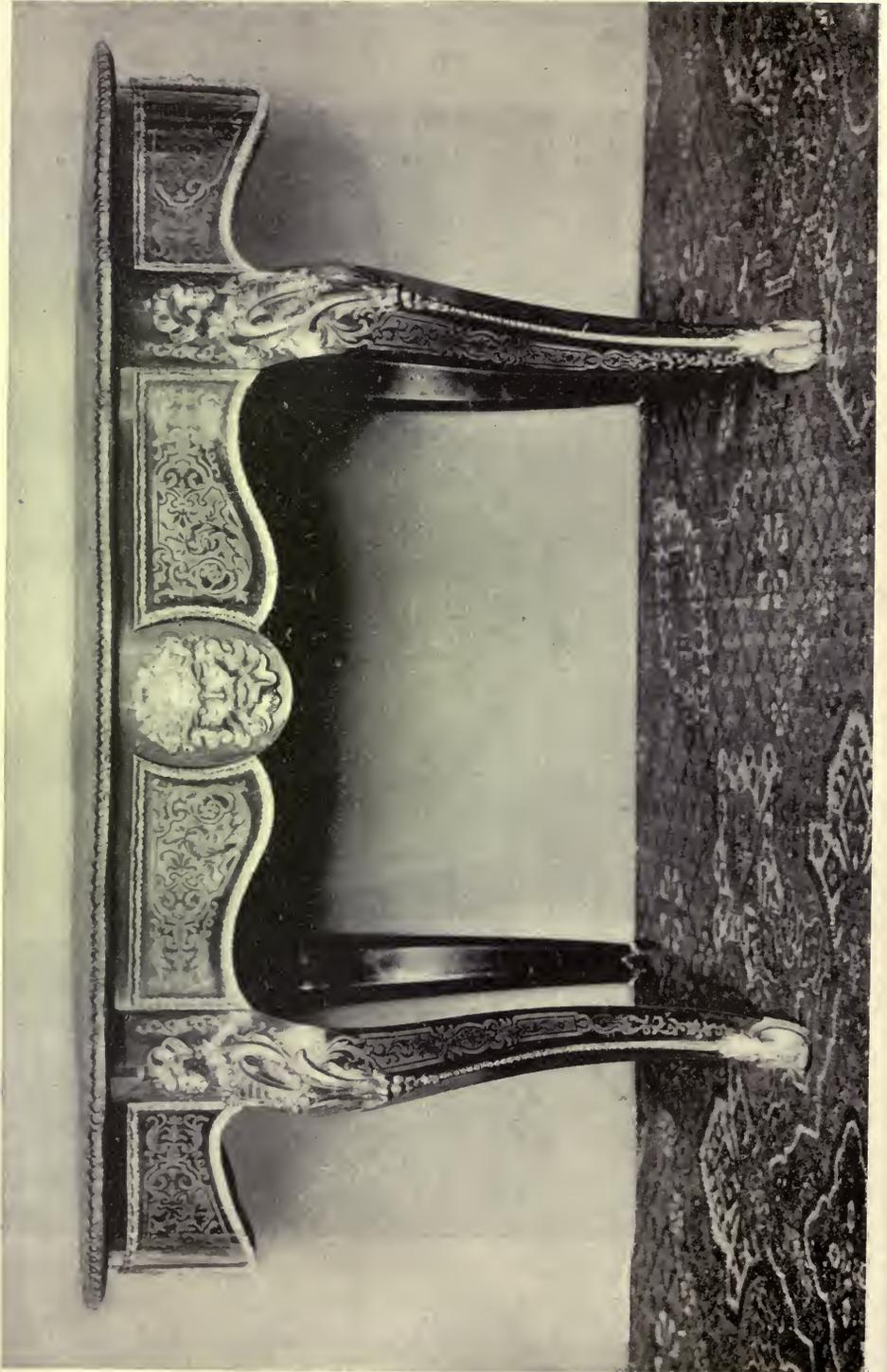
An essential part of the scheme of decoration is the furniture.

Plenty of unexceptionable designs can be found; in fact the good designs have quite taken the place of the very bad ones of the past. Even in spite of the revival of renaissance design in furniture it is done skillfully, delicately and quite in the spirit of the old renaissance. Nevertheless, it is well to be cautious in buying renaissance furniture for unpretending surroundings. It is so rich that it is suited better to interiors where everything is of corresponding richness. If the surroundings be plain, the renaissance furniture with its elaborate carvings and gilded metal mounts is apt to cast them quite into the shade.

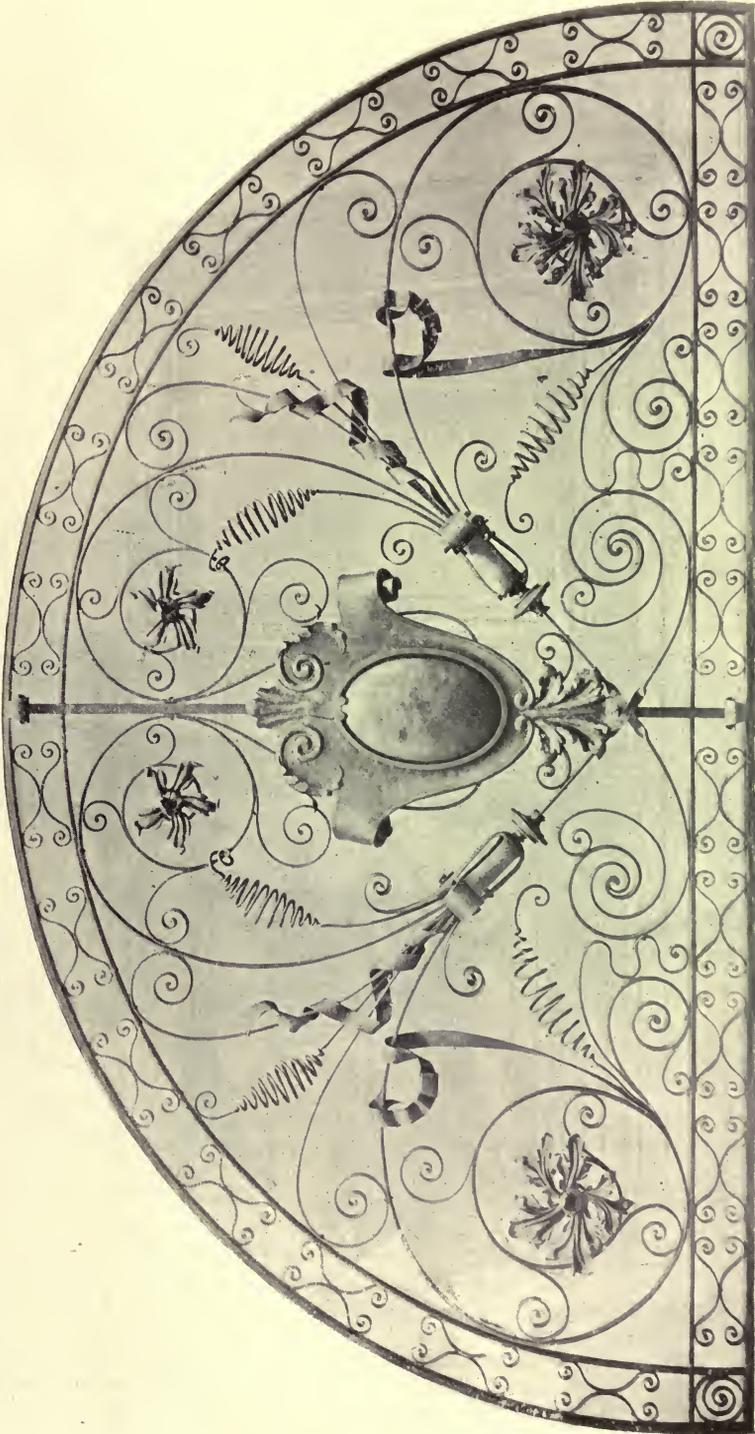
There can be nothing better than the straightforward hardwood furniture of the best make of to-day. Simple, strong, having its origin in the precepts popularized by Eastlake, but with the crude and barbarous character of the earlier designs refined and light-



LOUIS XVI. FURNITURE, COMPIÈGNE.

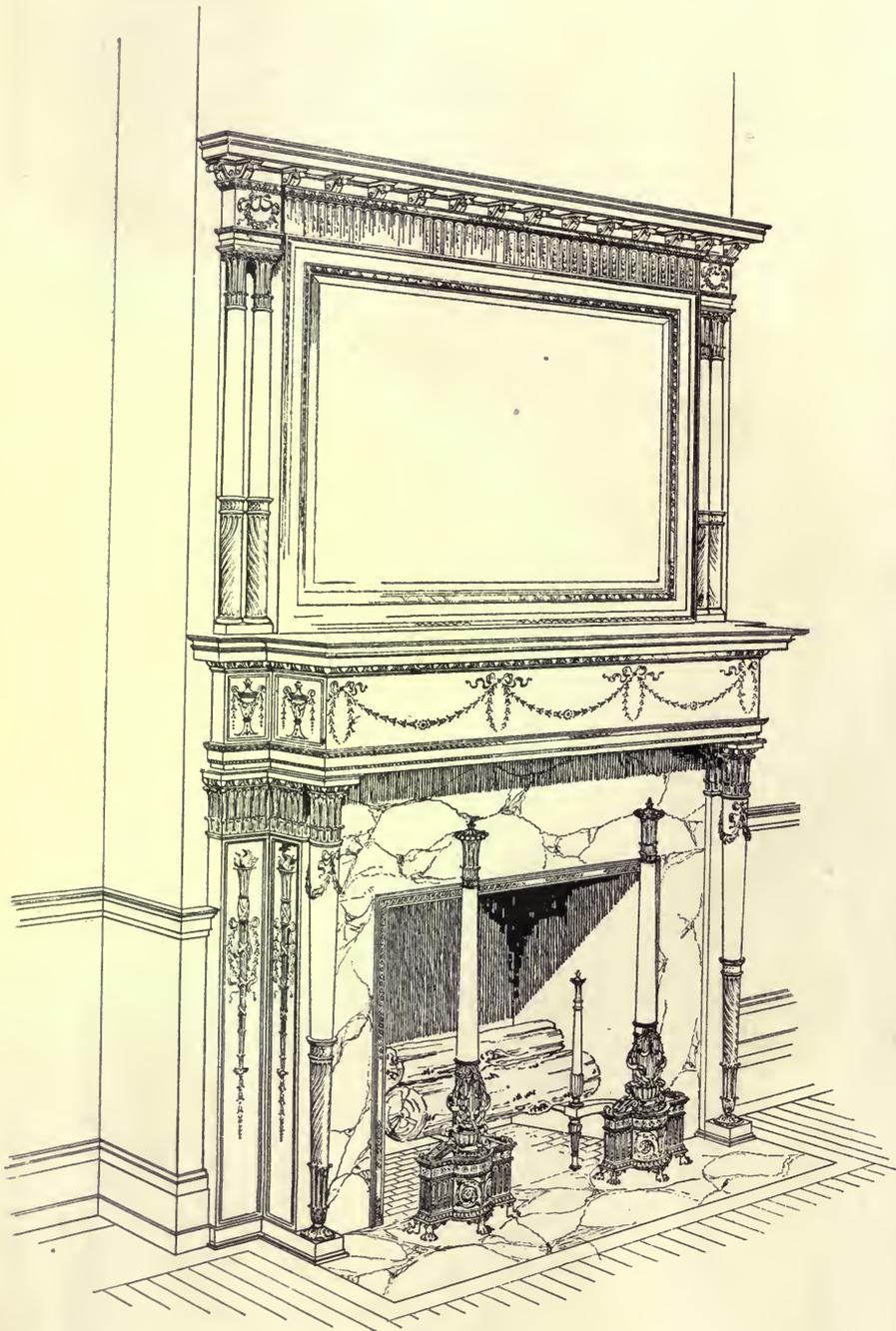


LOUIS XIV. TABLE, LUXEMBOURG.



DOOR GRILLE.

Wm. H. Jackson & Co.



MANTELPiece.

Designed by Davis, Reid & Alexander.

ened without loss of real constructive value.

They will call it in the stores by the names of various periods, but there is nothing more strictly modern and vernacular in the arts and crafts of the day.

Some passing fashions hardly recom-

to order as they are hard to find in stock.

In all of the innumerable details of decoration and furnishing, which is an inseparable part of furnishing, be guided not by the fashion of the moment, but use the fashion of the moment



NEWNHAM COLLEGE, CAMBRIDGE.

Basil Champneys, B. A., Architect.

mend themselves, the straight high-backed dining-room chair for example. If you can get hold of some of the low-backed dining chairs with arms of a generation ago, all curves and comfort, you will know how much a good chair conduces to a good dinner. But you will probably have to have them made

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where it commends itself to your good sense only.

In addition to good taste which is partly inborn, dependent no doubt upon congenital differences in nerve structure, there is another criterion quite as important—good judgment. The greatest art critics that have ever lived—the

Greeks—placed good judgment along side of or even above good taste, and had a word which we inadequately translate “the becoming” or “the suitable,” denoting that which satisfied the reason, as the beautiful was that which satisfied the emotions. We cannot do better in all departments than to adopt this double critical standard.

John Beverley Robinson.



FRENCH DESIGN FOR ELECTROLIER.

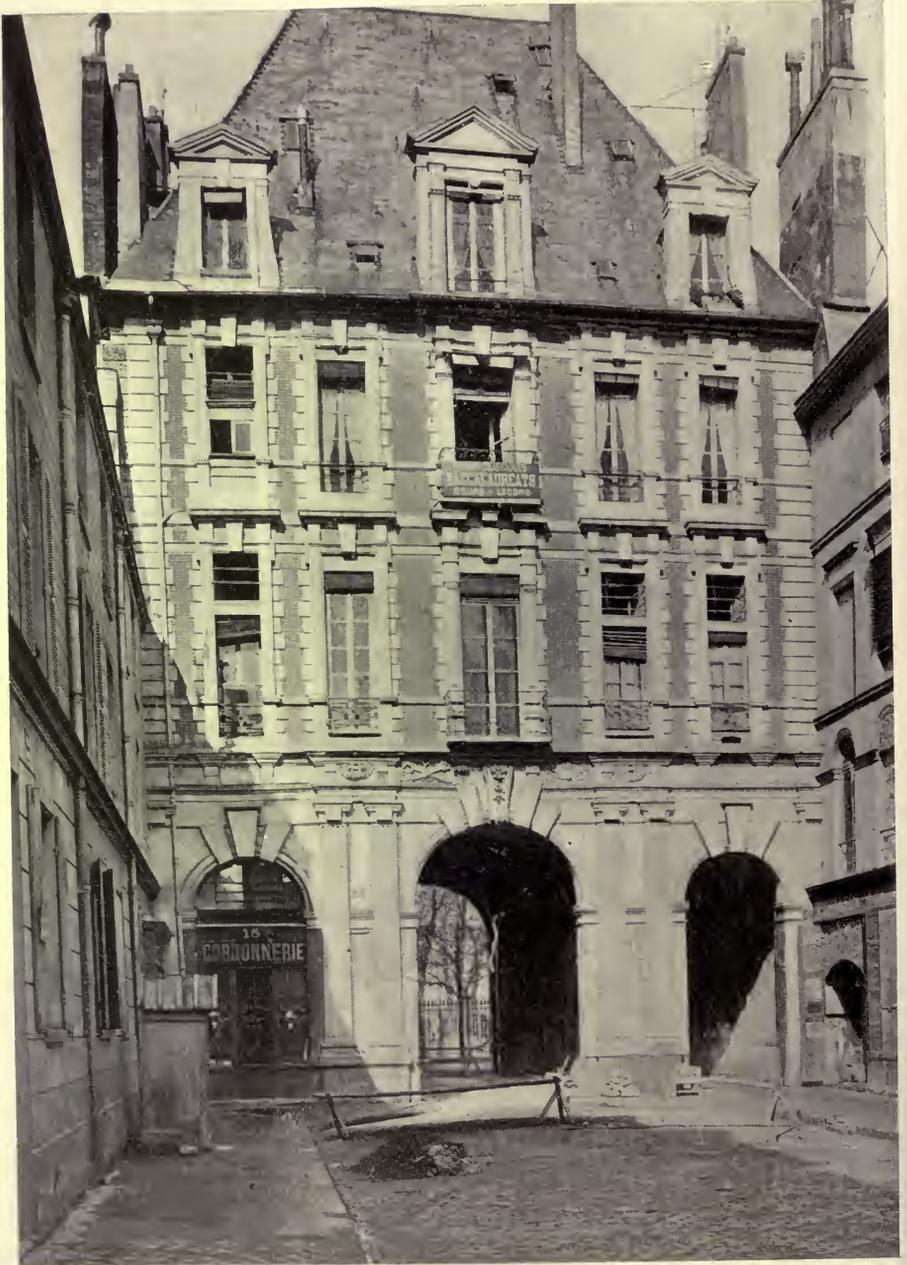


H. Patrice

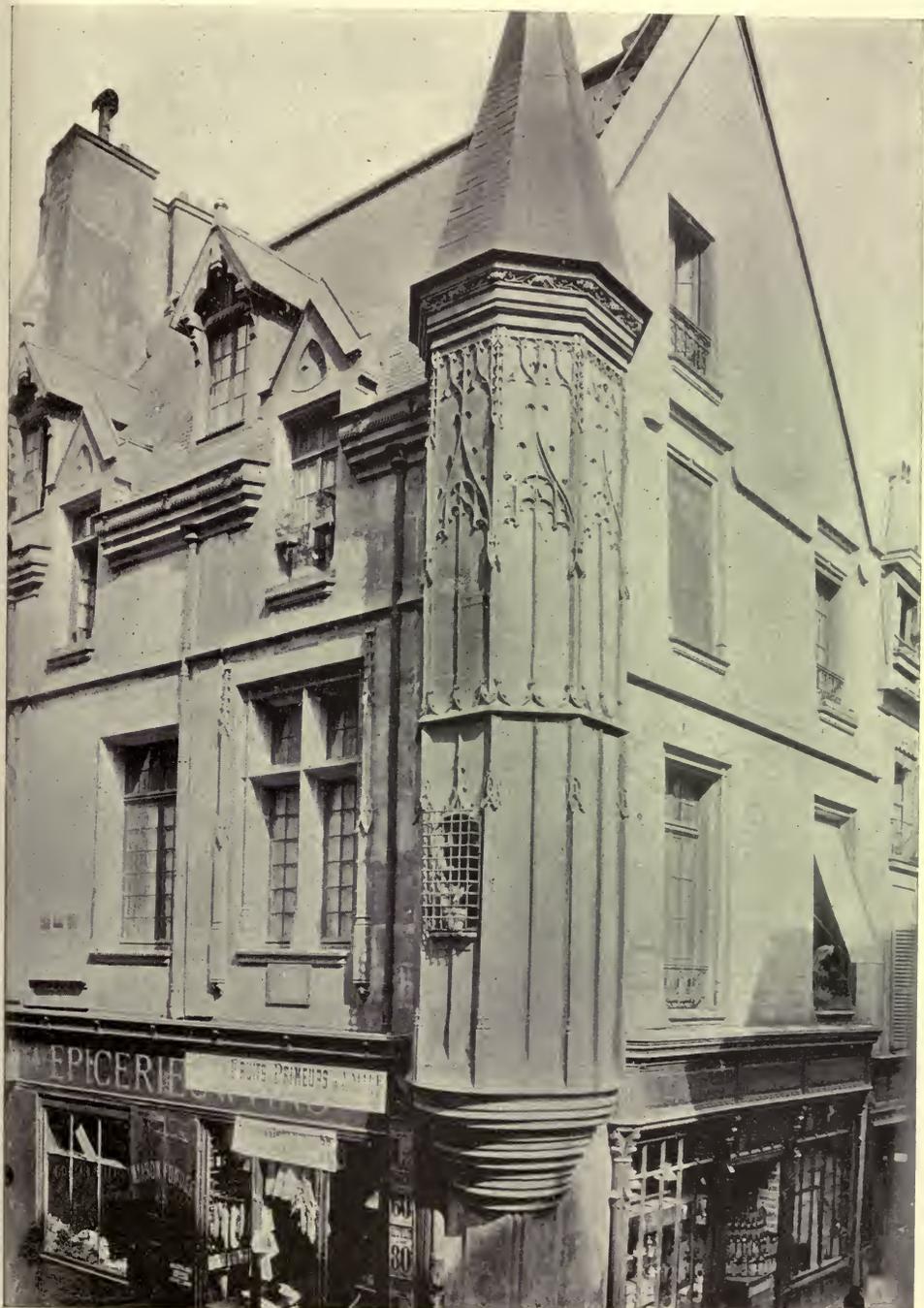
ARTISTIC

“BITS”

IN PARIS



OLD HOUSE PLACE DES VOGES.



ANGLE TOWER, RUE VIEILLE DU TEMPLE



OLD DOORWAY, RUE ST. PAUL NO. 5.



DOORWAY, RUE STE. APPOLINE NO. 12.



OLD WINDOW, RUE FRANÇOIS MIRON.

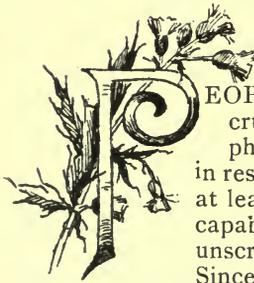


PAVILION ON THE QUAY CITY HALL, PARIS.



ARCHITECTURAL ABERRATIONS.

No. 11.—THE MEDINAH TEMPLE.



PEOPLE talk of the cruel justice of photography, but in respect of buildings, at least, the camera is capable of gross and unscrupulous flattery. Since this series was begun it has hap-

pened that the seeker after aberrations has come upon what seemed without any doubt to be his quarry, and has hailed it with a joyful shout, only to find out, after the photograph had been ordered and taken, that the thing did not look so excruciatingly bad as it was. That was the case with a government building in a Western city, which is in fact one of the most awful results of the official method of design. A frightful jumble it is, and looks, as indeed many other government buildings look, as if it had been done in sections by different draughtsmen, so many running feet per draughtsman, and without consultation. The Supervising Architect often seems to think it an architectural as well as a moral merit not to let his left hand know what his right hand doeth. But when this horror came to be photographed, while

it remained a stupid building, it was by no means so aggressive on paper as in stone, and the notion of presenting it had to be reluctantly abandoned.

Readers must take our word for it that, even as Wagner's music has been said to be better than it sounds, so the Medinah Temple is worse than it looks. It is not likely to be admired by anybody, even in the reproduction, but the reproduction does not excite that acute horror that is evoked by the original when the wayfaring man comes upon it in the streets of Chicago. Perhaps that is in part due to its color, though it is a monochrome of buff in which many good buildings have been made. Perhaps it is because of its surroundings, for the tall buildings of Chicago are for the most part plain and businesslike, and therefore even the unsuccessful ones are not apt to be offensive. It may be that in Philadelphia the Medinah temple would look tame and quiet. Whatever be the explanation, the fact is that the Medinah temple must be seen to be appreciated.

The peculiarity of the building, as is shown from the photograph, is that it is a superposition of a palace on a factory, of a very palatial palace on a very

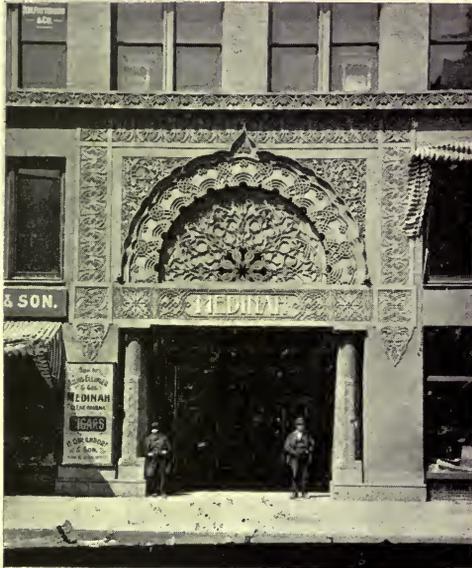


Chicago, Ill.

MEDINAH TEMPLE.

bald factory. The top and the bottom have absolutely nothing to do with each other, and the resulting incongruity is as great as that of a tramp with a new silk hat. Most buildings aim at some character, as of massiveness, or elegance, but this structure has two distinct characters that nullify each other and leave the spectator absolutely bewildered. It is one of the most contradictory and self-devouring edifices that were ever seen. Not only is there no

sizing anything else. The broad inclosing piers are emphasized by their breadth, which is proper and agreeable, and in these alone up to the point at which the palace supervenes upon the factory, there seems to be an intention to emphasize the height. But at this point, although the angles thus emphasized are carried up into the tower and separately roofed, the designer seems to have abandoned his intention, for he has crossed the tower with the most emphatic horizontal members possible. The



ENTRANCE TO MEDINAH TEMPLE.

general expression aimed at or attained, but there is not even a development of any one dimension. The general plan is a square, and the general form is a parallelepiped that is not far from a cube. This is a misfortune which one would suppose the designer would invoke the resources of his art to mitigate or dissemble, but it does not seem to have struck the designer of the Medinah temple as a misfortune at all.

Apparently he likes his buildings cubical and thinks a box a desirable architectural form. At any rate he has emphasized the squareness and the cubicality in the design by not empha-

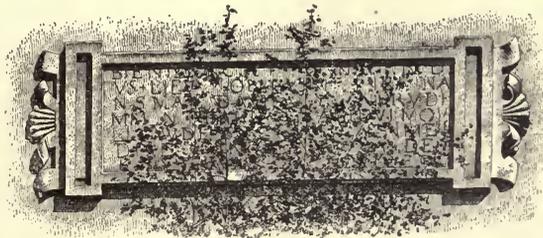
shaft of the tower, the eight stories next above the basement emphasizes the height and shoots and spindles. Above, the tower is kept down as low as can be, and thus the feature is self-contradictory. The treatment is an illustration of the variety of purpose which is the main part of the design. So far as the general composition betrays any purpose, it is to aggravate the unfortunate squareness of the mass. To this end, if to any are the square towers at the corners of the square. To this end the careful avoidance in the main mass of emphasis either upon the horizontal or the vertical lines, and in the towers

the emphasis of vertical and horizontal lines by turns.

But undoubtedly the variety of purpose is carried to its extreme limit in the superposition of the palace on the factory. Most people have heard of the famous criticism of Frederick the Great, when he came home from the wars, upon the new museum that had been built during his absence. He said it was a jail at the bottom, a church in the middle, and a bower of Lydia at the top. A like criticism may be passed upon the Medinah temple.

The only explanation it suggests of its purpose is that an Oriental gentleman engaged in mercantile pursuits, pursues his business on strictly business principles, and keeps his harem in luxury and regardless of expense over the shop which pays the expenses of his sumptuous living, giving only an indication in the gorgeous doorways of the bald basement of the voluptuous delights that await him upstairs. The negation of architecture, even to the most rudimentary expression of the construction in the lower part is violently contradicted by the sacrifice of everything to architecture in the upper. The sacrifice is very complete, for what can be the use of the thirteenth story, between the towers? The variety of purpose is so great that it is difficult to believe that it is all the work of the same man. Rather it seems that a builder, having con-

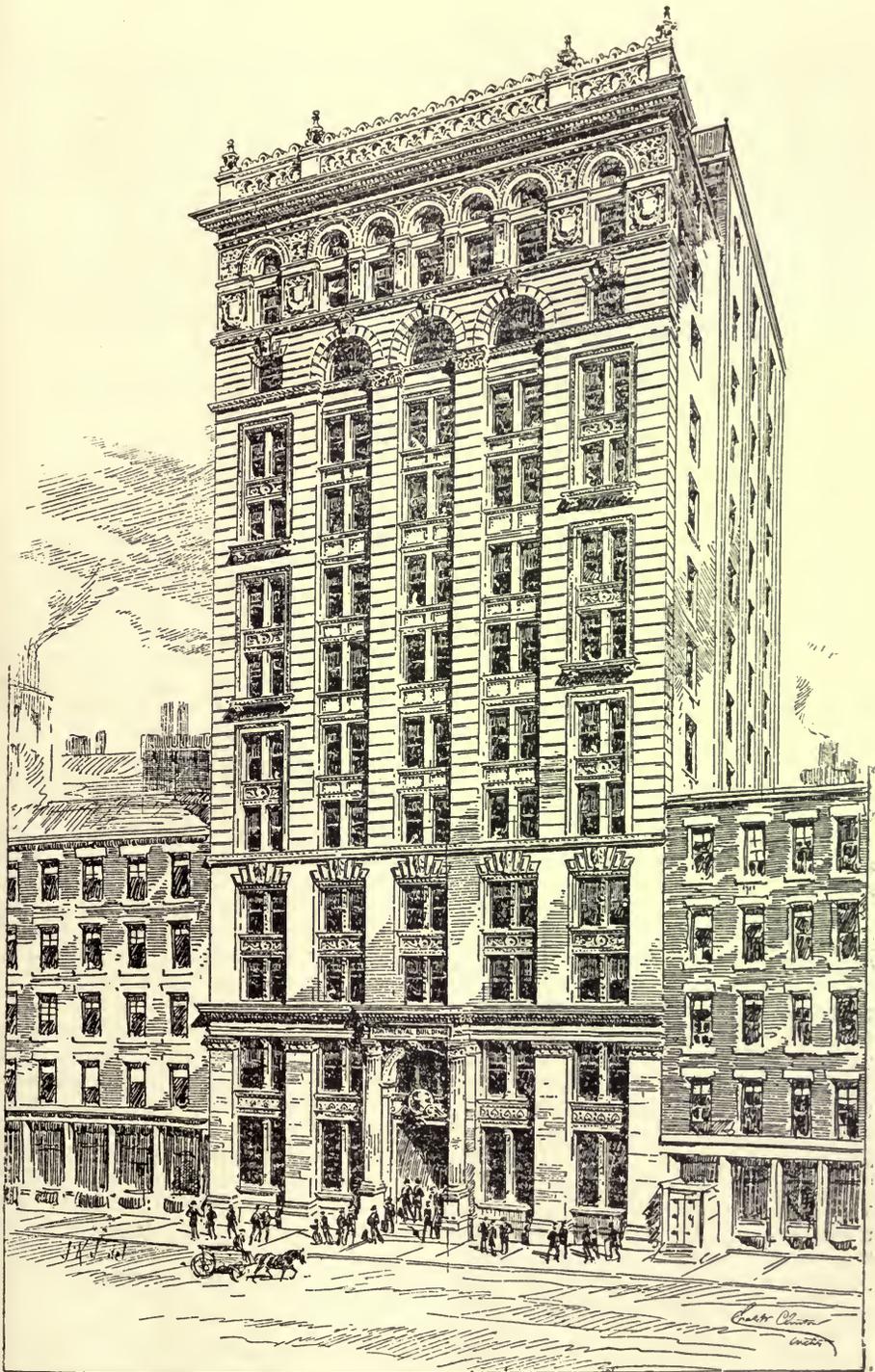
structed ten stories in the simplest and baldest way for purposes of mere utility, had suddenly been smitten with compunction, and impressed with the necessity of doing something for art, and had called in an artist to let himself loose upon the entrances and the upper stories, regardless of reason or expense. It recalls the application of Artemus Ward to the young man whom his daughter introduced to him as an artist who threw so much soul into everything he painted. "What will you charge to throw some soul into my fence?" That would explain the soulful and even gushing crown of a soulless and most prosaic structure. The soulful gentleman was not particular about the sources from which he drew his decoration. It purports, in a general way, to be Saracenic, and Saracenic architecture lends itself so readily to surface decoration and to terra cotta that it seems odd it should not be oftener invoked. But there is a mixture of French and Italian Gothic with the Saracenic, and the Italian belvederes do not consort very well either with the fenestration or with the mural decoration. Still the general aspect of the building and its expression are pretty distinctly Oriental. The rigid devotion to business in the business part of the structure and the exuberant pretentiousness of the social or domestic part imparts to it this character which, if not specifically Saracenic, is pretty evidently Semitic.





THE COFFEE EXCHANGE NEW YORK
R.W. GIBSON ARCHITECT

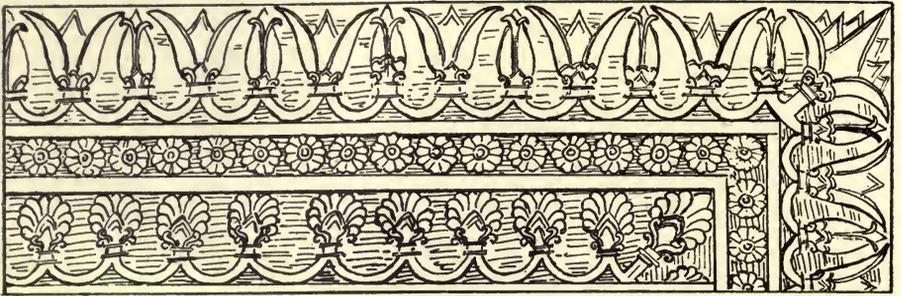
*James Adams
D.D.*



THE CONTINENTAL INSURANCE COMPANY'S BUILDING.

Cedar street, New York City.

Chas. W. Clinton, Architect.



ORIGIN OF THE ACANTHUS MOTIVE AND EGG-AND-DART MOULDING.*

I.



SINCE the publication of my last Paper I have to thank my friend Dr. H. Colley March, of Rochdale, England, for the great favor he has done me in bringing to my notice the researches of Dr. Hjalmar Stolpe, of Stockholm, on the pattern ornament of the Hervey Islands in the South Pacific.†

The ornamental system of the Hervey Islands, which is most easily known through the curious ceremonial axes to be seen in various museums, among others the Natural History Museum of New York, offers the only geometric patterns which ever occasioned me serious disquietude as to the belief which I have reached through the study of Greek ornament, that geometric patterns made for purely decorative purposes are absolutely foreign to the nature of primitive and prehistoric man. Since I have become acquainted through Dr. March's kindness with Professor Stolpe's proof that the "K pattern" of the Hervey Islands is derived from a series of human figures having magical and religious significance, and with Professor Stolpe's convictions that natural forms imitated for magical or

symbolic purpose are generally the basis of linear patterns in the Pacific ornamental systems I have no hesitation in saying that the lotiform origin, historic continuity, and traditional repetition of the system of patterns with which I am dealing will soon cease to be a matter of doubt with every well-informed person.

Before continuing the argument of my last Paper, let me say, therefore, that I am gradually moving toward a demonstration for the historic continuity of the meander pattern (so-called Greek fret) wherever it is found, and that this demonstration will ultimately revolutionize the study of American antiquities and of the Asiatic cultures as related to them.

On the general subject of the magical uses and realistic beginning of primitive art I wish also to call attention to a recent article in the *Popular Science Monthly* (April, 1894, "The Origin of Art.") This announcement by M. Lazar Popoff is the first which I have seen of a conviction which I had independently reached by quite another line of study, regarding the magical purpose of the now famous drawings of the cave men of Palæolithic Europe.

* Being the Fifth Paper of a series on the Evolution of Classic Ornament from the Egyptian lotus.

† "Evolution in the Ornamental Art of Savage Peoples; Ethnographical Researches, by Dr. Hjalmar Stolpe, of Stockholm," translated by Mrs. H. C. March. [Reprinted from the "Transactions of the Rochdale Literary and Scientific Society."]

II.

Before taking up the egg-and-dart moulding and its related motives it is necessary to continue the argument for which my last Paper on the anthemion furnished the necessary basis, by show-

stated. It only needs to be illustrated.

I will first notice the distinction between isolated scroll or spiral ornaments, and the continuous spiral scroll. By the continuous spiral scroll I understand a motive like that on the bronze



Prehistoric Swedish bronze axe. Continuous spiral scroll.

ing that this argument involves the unity and lotiform origin of all classic spiral and scroll ornament. The spread and expansion of spiral ornament from its original home and centre is a distinct question. That the spirals and scrolls of modern Europe are derived from the Greek, that the spirals of prehistoric Europe are derived from Egyptian, that the spirals of the Malay Archipelago are derived from India and these again from Mohammedan and these again from Byzantine, that the spirals of modern Alaska or the Aleutian Islands can be traced to the Yakoots of Eastern Siberia and these again to the Buddhists of India and Thibet, or the Mohammedans of Turkestan and Mongolia—these are facts whose demonstration has little or nothing to do with the question of original evolution.

For the time being I will confine myself to Greek art and to the proposition that all the spirals and scrolls of Greek art are lotuses in origin. The demonstration for a very large series is a very easy one. It consists in an appeal to the expert in Greek ornament to verify the fact that all the isolated or disconnected spirals and scrolls of Greek art, as distinct from the "Mycenæ" continuous spiral scroll, are simply variants of the Ionic form and of the anthemion. As we have already proven the Ionic form and the anthemion to be lotuses the resulting conclusion need scarcely be

axe herewith from Sweden. This continuous spiral scroll is very rare in early Greek art, but very common in the art of the "Mycenæ culture," which I believe, with others, not to have been Greek. In place of the continuous spiral scroll in early Greek art we find the meander and the guilloche, both of which are mainly, perhaps entirely, unknown to the art of the "Mycenæ culture" as so far discovered to us.

Considering by contrast with these above-named motives the scattering or isolated Greek scrolls and spirals it is clear that the expert who observes them all to be variants of Ionic forms or of anthemions has observed them all to lotuses, according the demonstration, in my last Paper, for the original identity, as regards derivation, of the Ionic capital with the anthemion.

We must now therefore observe the far-reaching consequence of this identification of the Ionic capital with the anthemion. It obliges us first to concede to be lotuses all the Ionic forms of surface ornament in general which correspond to the demonstration already given for the Ionic capital. Because the demonstration for the anthemion includes surface ornaments as well as architectural members (for the anthemion is found in both characters), therefore the argument at large is now transferred from architectural members to surface ornaments, for the Ionic form as well as the anthemion. In other words, we begin now to consider the

Ionic forms which are not capitals. For instance, if the Ionic capital of Mashnaka, herewith in text-cut, be a lotus, according to the same demonstration we must include the detail No. 18 on page 91. If the survival of the central sepal spike fixes the lotiform derivation of the Assyrian and Etruscan Ionic capitals herewith in text-cut, it also fixes the



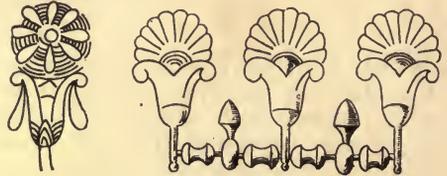
lotiform derivation of the pottery ornaments on Melian vases like Nos. 4, 5, 12 of page 91. If we admit the Cypriote lotus flower to our argument for the Ionic capital we cannot exclude the Rhodian derivatives of page 91, Nos. 14, 16. Compare the Cypriote detail in text-cut.



Finally, when we consider the curious varieties of the Proto-Ionic form which I have collected on page 91, noticing that some are amulets, some pottery details, some decorative details in carvings, and some capitals or steles—it is quite clear that the Ionic capital is only one instance of a larger, more comprehensive fact in the history of the volute.

It is when we turn to the anthemion itself, however, that the really tremendous significance of our demonstration of the last Paper begins to dawn upon us, as regards the volute and spiral in Greek art. Consider how endless are the variants of its anthemions. Although the anthemion also appears like the Ionic capital, as an architectural terminal ornament or even as a support, when some forms are considered, its variants and types in surface ornament will outnumber the phases of the Ionic form proper, ten thousand to one. In nearly all these types and variants the volute appears; wherever it appears in all these types and variants the one demonstration holds.

In considering these variants I think we ought first to distinguish between those which appear in the earlier works of Greek art, and which are due generally to the original distinction as to individuality and character between a Greek and an Egyptian or which are due especially to the transfer of the motive from hard material to brush work on pottery—and those variants which are due to the general historic movement in Greek art, from the simple to the complex, from the primitive and symbolic to the ornate, highly elaborated and purely decorative motives.



Egyptian types.

In speaking of the former class we shall do well again to return first to the Egyptian originals and notice what amount of variation they exhibit. In



Phenician types.

the Egyptian types of the lotus palmette, whose derivation from a combination of lotus and rosette has been explained and illustrated in my last Paper, we shall notice a certain severity of outline and formalism of treatment, whether in hard material like a porcelain amulet, in jewelry, or in fresco. The types herewith above, are



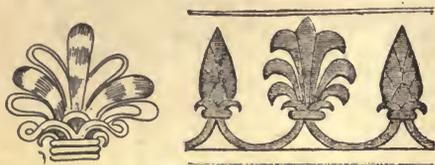
Cypriote and Persian types.

mainly reminders or repetitions of those already illustrated. In the Oriental (Assyrian or Phenician) copies of these



VARIANTS OF THE IONIC FORM, ARRANGED TO SHOW THE IDENTITY OF THE IONIC CAPITAL WITH THE SAME FORM IN AMULETS AND DECORATIVE DETAILS.—1, Cypriote capital. 2, Cypriote pillar capital. 3, Cypriote pillar capital. 4, Melian pottery. 5, Melian pottery. 6, Detail of a Greek mirror handle. 7, Syrian capital. 8, Assyrian ivory detail. 9, Egyptian fresco motive (18th Dyn.). 10, Etruscan Ionic capital. 11, Ionic capital, Macedonia. 12, Melian pottery. 13, Assyrian ivory detail (Egypto-Phenician). 14, Rhodian pottery detail. 15, Jewish capital. 16, Rhodian pottery. 17, Early Athenian capital. 18, Greek furniture detail, from pottery.

motives we notice the same character. The extreme limit in the direction of free and graceful variation reached by Oriental art, is denoted by an Assyrian fresco motive herewith.

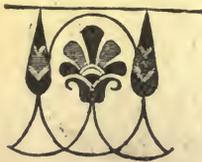


Assyrian types.

We shall do well to consider first among our Greek motives those which adhere most closely to the Oriental type. In Cypriote Greek art, as is natural, we find the closest exact repetitions of the Egyptian type, for instance in the tendrils between the upper scrolls of the Cypriote pillar capital herewith. The same lotus palmette on a tendril is occasionally found in early Italian art, probably derived from the Cypriote. Let us add now some of the Greek pottery motives which have the closest relation to the originals on metal or other hard material, for it is clear that imported works in metal first carried the lotus palmette to Greece and Italy (text-cuts below).



Cypriote pillar capital on which appear lotus palmettes on tendrils. (Ohnefalsch-Richter.)



1



2

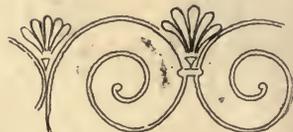


3



4

Early Greek anthemions, normal types.—1, 2, 3, Pottery design taken from metal. 4, Design on metal.



Greek pottery types, arranged to illustrate contrasts of development for palmette and spiral.

From the point indicated by these normal forms on pottery (meaning by normal forms those types in which the two original divisions of the lotus palmette, viz., demi-rosette and lotus volutes, are about evenly balanced, and which are consequently normal to the original type), the Greek anthemion moves in two directions—either toward types in which the palmette predominates and occasionally appears without any volutes whatever, or toward types in which the spiral is the dominant member and also occasionally the sole survivor.

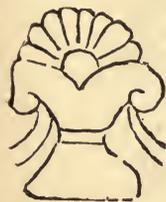
Still another class of anthemion variants is that in which one spiral of the



1



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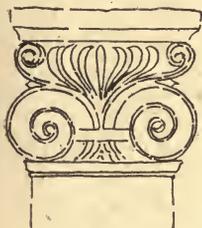
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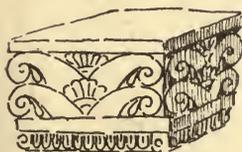
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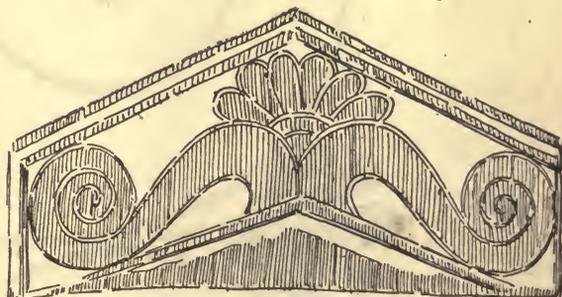
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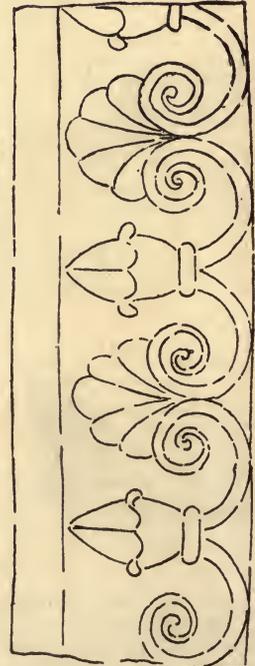
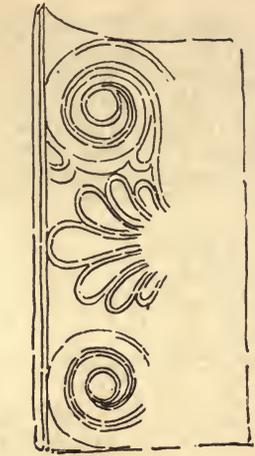
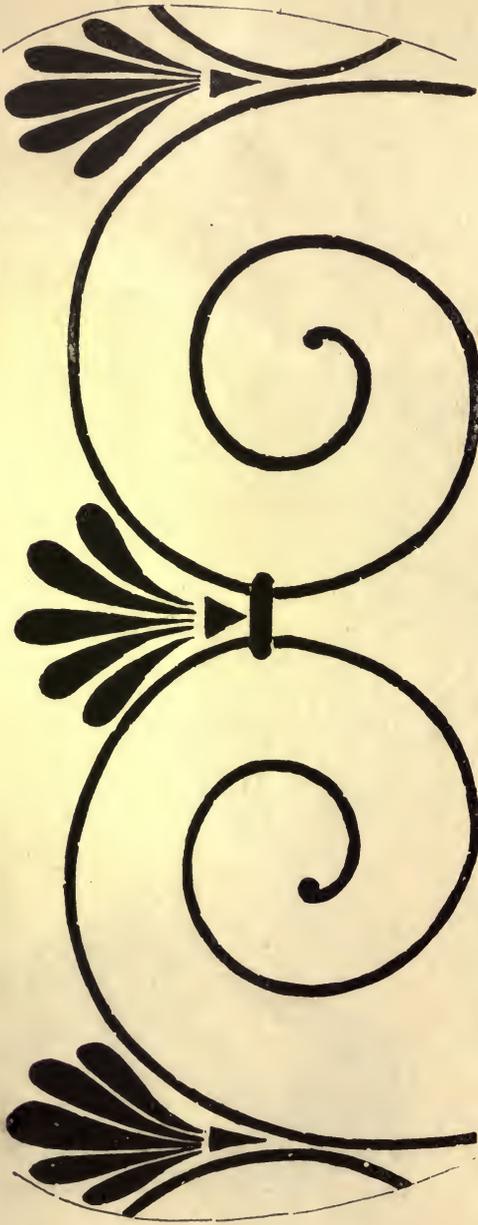


10



11

VARIANTS OF THE ANTHEMION, ARRANGED TO CONTRAST PRIMITIVE WITH LATER DECORATIVE FORMS.—1, Late Greek stone carving, Macedonia. 2, Assyrian ivory detail (Egypto-Phenician). 3, Primitive Greco-Etruscan or Phoenician, Regulini Galassi tomb, bronze *repoussé*. 4, Egyptian amulet (compare Fourth Paper, page 286). 5, Cypriote pottery (Sacred Tree). 6, Rhodian pottery. 7, Late Greek stone carving, Macedonia. 8, Greek stone carving, Sicily. 9, Incised bronze, Greco-Etruscan. 10, Primitive Etruscan Ionic capital. 11, Early Greek terra-cotta antefix, with upturned spirals; from Tiryns.



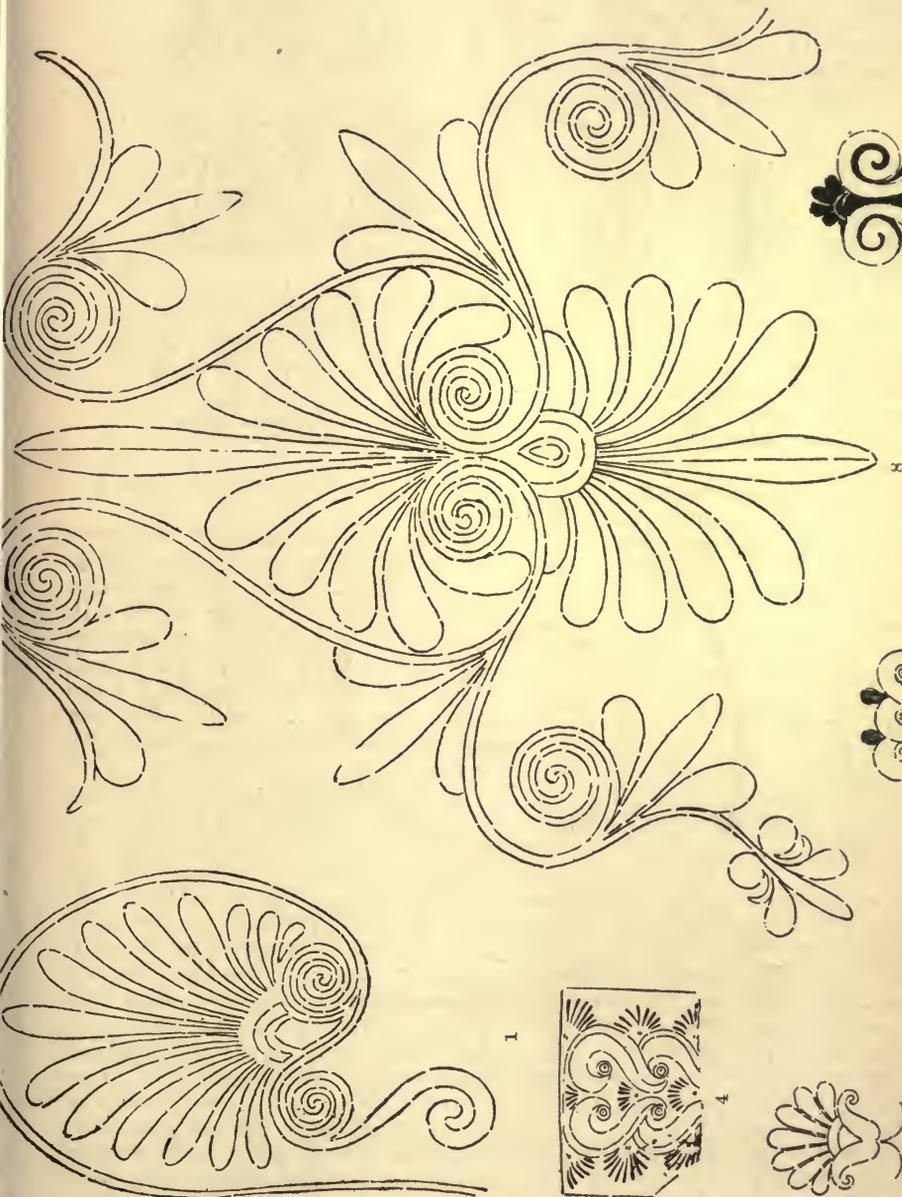
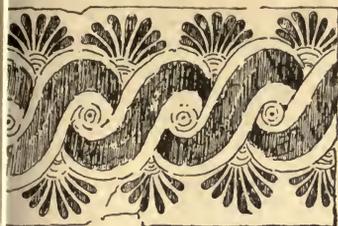
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VARIANTS OF THE ANTHEMION.—1, Greco-Etruscan bronze *repoussé*. 2, Greek pottery form (to compare with No. 4). 3, Greco-Etruscan bronze *repoussé*. 4, From a Rhodian vase. 5, Asia Minor stone carving; lotus buds and palmettes, mistaken by Ferrot for "oak leaves and acorns." 6, Anthemions showing inverted or upturned volutes; stone carving, from Macedonia.



10

VARIANTS OF THE ANTHEMION AND GUILLOCHE, SHOWING LATER DECORATIVE ELABORATION (8) TO COMPARE WITH EARLIER (1 AND 3) AND PRIMITIVE (6 AND 9) —
 1, Greek pottery. 2, Guilloche with palmettes from Greek terra-cotta sarcophagus in Vienna. 3, Greek pottery. 4, Greek pattern of connected anthemions with inverted volutes.
 5, Greek pottery, hence *repositus*, of connected anthemions. 6, Greek pottery. 7, Guilloche with lotus buds, Greek pottery from Egypt. 8, Greek pottery. 9, Greek pottery.
 10, Painted Greek terra-cotta; connected anthemions with upturned volutes (compare No. 4).

normal form is inverted to produce a scroll (see cut). These cases of the



Spiral scroll, Melian pottery.

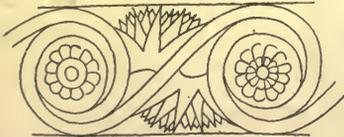
scattering or isolated scroll are confined to the archaic Greek vases and are not very common on them. The general survival in these cases of the palmette filling is sufficient proof of the palmette



Melian types of the scroll and spiral.

lotiform origin. One way in which such an inversion might originate is suggested by the arrangement herewith of Melian doubled lotuses repeated from my last Paper.

The alternating inversion of one lotus volute is, however, a constant appearance in the Egyptian lotus spirals and the suggestion for the inversion of one volute of the anthemion was probably hence obtained, as the Greeks in Egypt must have been in daily contact with this pattern (text cut herewith).

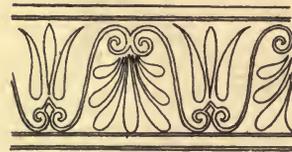


Egyptian type of the lotus spiral.

Still another phase of anthemion variation is that shown on page 95, by Nos. 4, 5 and 10, and in larger detail on page 275 of my last Paper. I should add that the appearance on this plate (page 95) of two phases of the guilloche, although combined with lotus buds and lotus palmettes, is premature as far as my present argument is concerned. (Nos. 2 and 7.)

I must finally call attention to those anthemion variants in which both volutes are inverted and turned upward

page 93, No. 11 and page 94, No. 6. Among all these phases of the anthemion, the most constantly repeated and most familiar is the type found on Greek vases alternating with lotus buds or lotus trefoils.



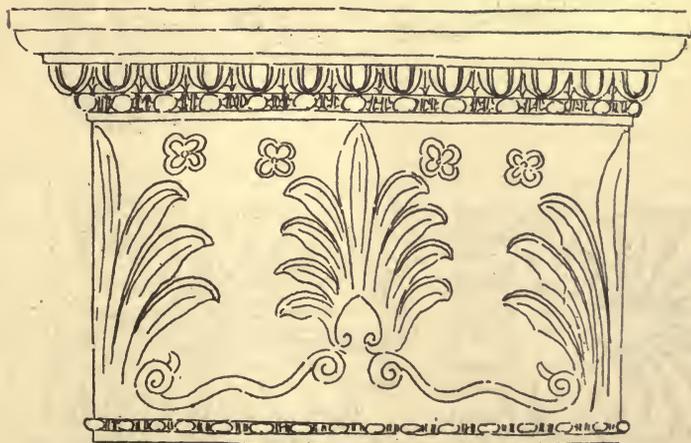
Greek pottery types of lotus trefoils and anthemions.

As time went on most of the primitive forms enumerated were transformed and elaborated by decorative foliated details. The type of the fifth century B. C. in stone carving is easily distinguished from that of the fourth or third, and I have arranged the details of pages 97 and 98 to illustrate the general movement from simplicity to elaboration.

The first appearance of such foliage detail known to me is at the base of the anthemions of the Erechtheum. For the decorative transformations of the lotus itself in Alexandrine art and in the Roman art derived from it, a fine indication is furnished by the illustration of page 99. In this case the anthemion itself preserves a more definitely primitive form and assists us to specify the origin of the intermediate foliate detail. The student is often assisted in this way in specification of more remote forms by the associated survival of others more easily defined or by the association of two forms, both remote but both specified by the asso-

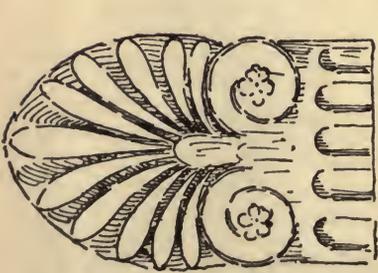


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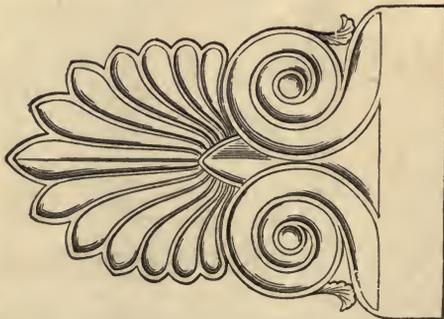


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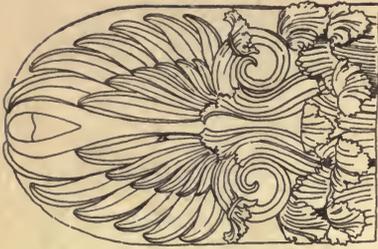
VARIANTS OF THE ANTHEMION ARRANGED TO SHOW CONTRAST OF LATE AND EARLY FORMS.—1, Early Rhodian vase, from Salzmänn; anthemions, normal lotuses and buds. 2, Late carved anthemions from Macedonia.



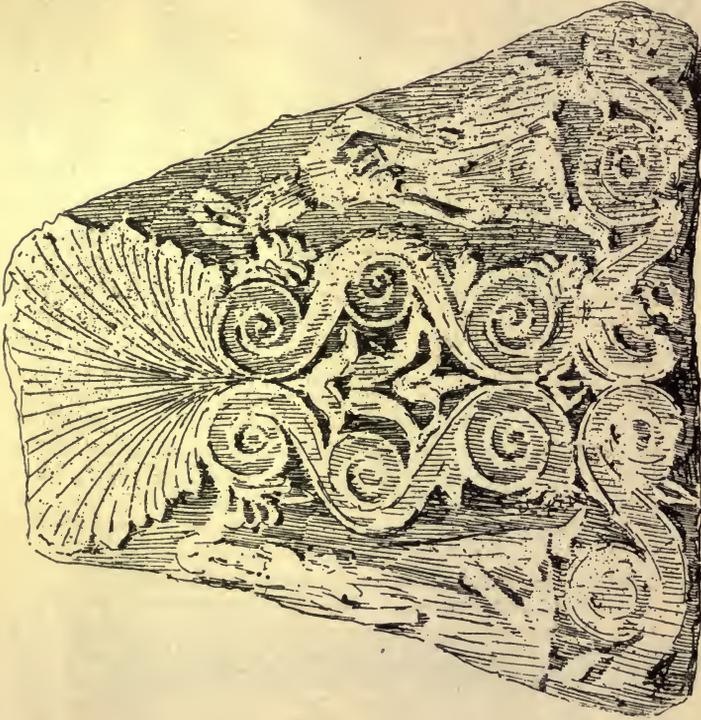
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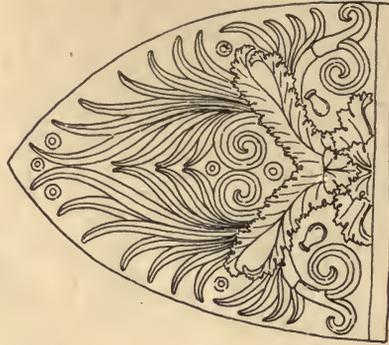
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4



3



5

SCULPTURED ANTHEMIONS ARRANGED TO ILLUSTRATE DIFFERENCES OF STYLE ACCORDING TO DIFFERENCE OF PERIOD.—Nos. 1 and 2 are early; Nos. 3, 4 and 5, are late. 1, Terra-cotta antefix, Italy, repeated from page 288, Fourth Paper. 2, Anthemion of the Parthenon, repeated from page 289, Fourth Paper. 3, From Maccdonia. 4, 5, Terminals

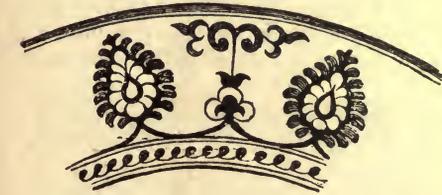


Greco-Roman anthemion and foliated lotus. Leaf-and-dart border below. Lateran Museum.

ciation. For example, in the Hindoo pottery motive herewith we might possibly be doubtful either of the bud or

III.

By the foregoing illustrations and text I have mainly wished to indicate one cardinal fact, viz.: That in Greek art the isolated volute or scroll is always a lotus, and demonstrably so by attention to the types of Ionic form and anthemion, because there are no isolated or scattering volutes which are not demonstrably Ionic or anthemion variants. The question now rises, does the continuous spiral scroll of ancient art also come within the evolutions of the lotus. This question is complicated by the fact that the continuous spiral scroll was not originally native to Greek art. It appears in forms which are apparently purely linear in Egyptian art, in the art of the "Mycenæ Culture" and in that of prehistoric Europe of the Bronze Age. We shall find it advisable to consider the problem of the continuous spiral scroll in connection with that of the meander pattern or "Greek fret," and of concentric rings, and before these motives can be accounted for we shall be obliged to illustrate certain curious facts regarding the originally magical and talismanic use of the motives so far debated.



Hindoo pottery motive. Ionic lotus and buds.

of the lotus were the forms separated, but the traditional association makes us certain of both. On the other hand, in late antiquity and still later time we

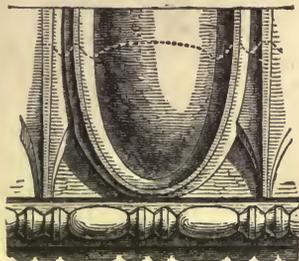


Survivals of primitive types in late Greek and Greco-Roman design. From stone carving and terra-cotta.

constantly meet with survivals of quite primitive forms, as witness the text-cuts herewith representing late Greek and Greco-Roman forms.

These facts are reserved for a separate Paper which will precede and lead up to another on the meander and the continuous spiral scroll, and I shall now

turn to the topic of the egg-and-dart moulding and its variants, among which the leaf-and-dart, also known as the leaf-and-tongue, is the most familiar. The egg moulding is now in



Egg-and-dart moulding.

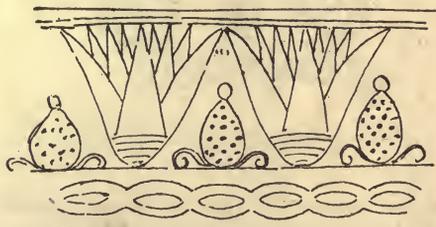
such universal use wherever European civilization has penetrated, and is so well known to be derived from Greek art wherever it is found, that the demonstration of its at once realistic and talismanic origin has far-reaching significance.

This demonstration is moreover one of almost amusing simplicity. A few moments' attention to those forms of the lotus border in flat and painted decoration which are most familiar to the student of patterns in Egyptian and early Greek use, is all that is needed to produce conviction. I have never met either an expert or a layman who did not instantly concede the demonstration which inverts the lotus border and then shows the result in a carved pattern, of incising the trefoil, lotus flower. My adverse critics have wisely avoided debating this demonstration and those who have cast wholesale ridicule on the conclusions of the *Lotus Grammar* have found it convenient not to mention the subject.

I need not say that the enormous expense to my various publishers of getting out the absolutely necessary illustration has caused me throughout my publications to avoid the republication of the better known and universally recognized lotus patterns—better known, that is, to students of ancient art and universally recognized by Egyptological experts. The constant repetitions of these patterns, although well known to some, cannot however be

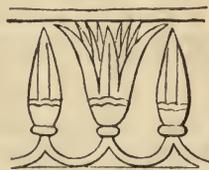
familiar to those who are novices in the history of ancient art, and yet it is also among these novices that I am looking for converts and believers. The Ethnologist, the Anthropologist, the partisan of evolution in Natural History, the student of Psychology as founded on the comparative study of barbaric and primitive man, the Historian of civilization—these are among the persons who are most accessible to an argument for the evolution of patterns from natural forms, most accessible to the proposition that decorative art as such was unknown to primitive antiquity, to the proposition that the primitive mind more easily creates a picture than an abstract geometric form, to the proposition that the man in a frock coat and pantaloons who amuses himself by drawing diagrams with his cane on the sand at the sea side is a different being from the Zuni who sees a magical formula in every painted line of his pottery.

Therefore I would urge on the reader of these pages, if unfamiliar with publications on ancient art, to compare my single text-cut herewith for the com-



Typical Egyptian border of buds and lotuses. From a tomb pattern in color.

monest of all Egyptian lotus borders, with the plates of Owen Jones' "*Grammar of Ornament*," or, Prisse d'Avennes' *Histoire de l'Art Égyptien* in order to appreciate their great number and constant repetitions. For Assyrian art, which borrowed and repeated this pat-



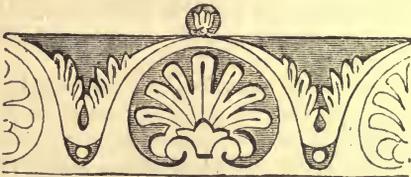
Typical Assyrian border of buds and lotuses. Detail from stone carving.

tern *ad infinitum*, let my one text-cut here entered suggest a reference to the plates of Layard, or the illustrations of Perrot. For the ordinary Assyrian lotus border as borrowed from Egypt see also p. 279 of my last Paper. For Hindoo art let my single text-cut suggest count-



Typical Hindoo border of buds and lotuses. Detail from pottery.

less other illustrations accessible in Birdwood's "Industrial Arts of India," in Fergusson, or in the "Archæological Survey of Southern India." Japan and China will occasionally furnish types of the same familiar pattern. The pottery of the Saracens in all periods, of



Renaissance border of anthemions and lotuses. From stone carving.

modern Morocco and of modern Spain, is full of it. Here and there you will find it in the stone carvings of the Middle Age. In Renaissance decoration its appearance is frequent.

It is surely significant that side by side with this continuance of the familiar and easily recognized lotus border in flat decoration there is to be found

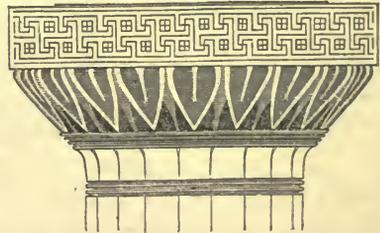
another motive in projected carving whose connection with it was forgotten at least as early as the fifth century B. C. and whose derivation from it is a mathematical certainty notwithstanding.

The egg-and-dart moulding as such is unknown to Egyptian patterns, a fact explained by the almost entire absence in Egyptian art of carved or incised lotus borders of any kind, the preference for flat ornament in color being the rule. Stone-carved patterns of any kind in Egyptian art are quite

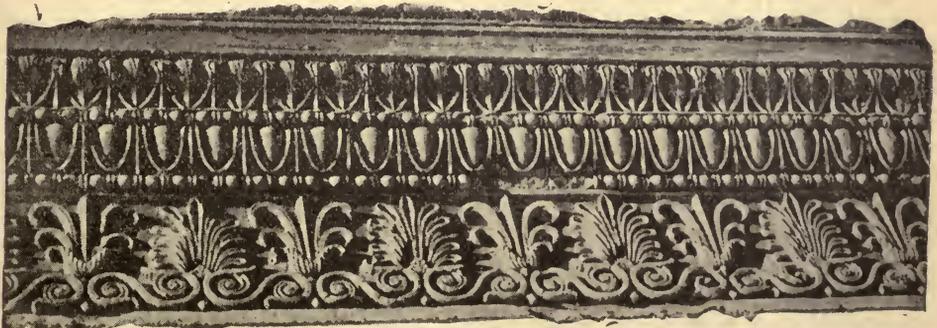


Lotus trefoils in bronze *repoussé* from Olympia. Motive producing the egg-and-dart when inverted.

rare before the Ptolemaic period. In Greek art the absence of patterns in projected carving is also a general rule down to the time of the Erechtheum. In Greek art also color decoration on flat surfaces was the rule in architecture for earlier periods. We have an instance on the Doric capital herewith of the



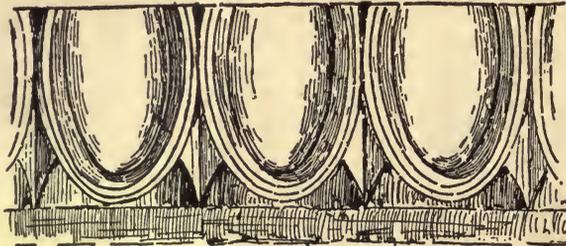
Doric capital from Ægina—the original leaf-and-dart was in color.



Detail from the Erechtheum. Egg-and-dart and leaf-and-dart borders above anthemions.

pattern in color which produces the egg-and-dart moulding when it is incised, and we know this flat color pattern to have been very frequent in earlier Greek art.

the failure of science to specify this fact has resulted in oversight of obvious connections between the types of Egyptian ornament and the forms in nature of the blue and white Nymphæas,



Ancient Persian egg-and-dart moulding. Greek derivative.

Our obvious proof for the relation of the egg-and-dart to the lotus is, however, derived from those lotus borders of Greek vases which are especially numerous on the pottery from the Greek Colony of Naukratis in the Nile Delta and on the pottery of Rhodes (see page 103).

Concerning these Greek borders in flat decoration three things have now to be observed—the frequent alternation with lotus buds, the frequent inversion of the border, and the frequent conventional reduction of the lotus to a trefoil form (page 103, Nos. 1 to 6 inclusive).

I have already pointed out in my third Paper* that the "Rose Lotus" did not find a place in the typical ornament of Egypt, that

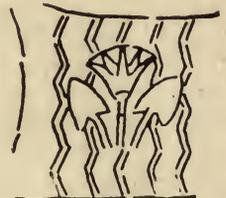
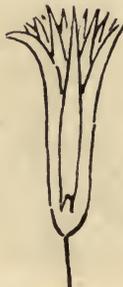
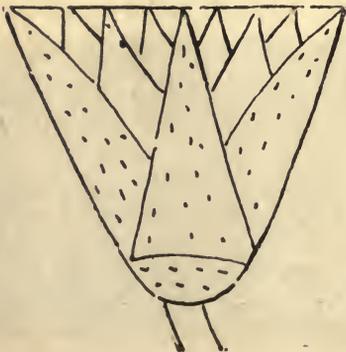
*ARCHITECTURAL RECORD for December, 1893. Much more explicitly in the "Grammar of the Lotus."

and that the most conspicuous instance of such connection lies in the "three-spiked" appearance of Egyptian lotuses as found in ornament, and as copying from nature the four calyx leaves of the natural flowers, and hence showing three in side view.*

If we now examine the fragments of Greek pottery on page 103 we shall find a survival of the petals on two of the details (Nos. 2 and 3) and a simplified conventional reduction to the trefoil form of the calyx leaves in the others (Nos. 1 and 4).

We will next consider the matter of the frequent inversion of the lotus border in Egyptian and in Greek art. In both cases the inversion is a frequently necessary decorative expedient. Where the border runs under the line of a tomb ceiling as frequently in Egyptian art, the line of the ceiling, that is the top of the wall, is the natural line of

*Pages 156 to 151 inclusive, Number for December, 1893.



Typical Egyptian lotuses showing the type of the Nymphæas and illustrating the three-spiked form as origin of the trefoil.



1



2



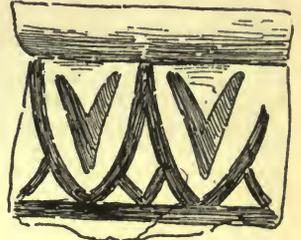
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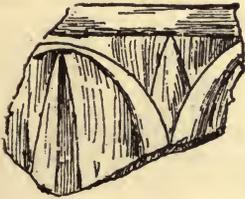
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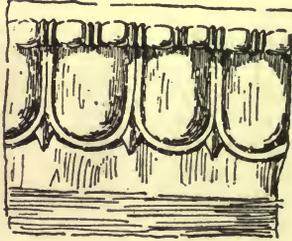
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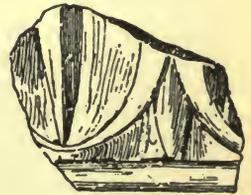
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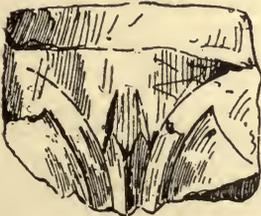
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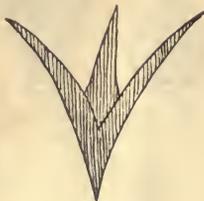
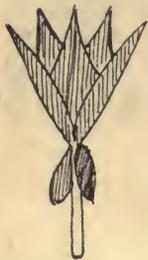


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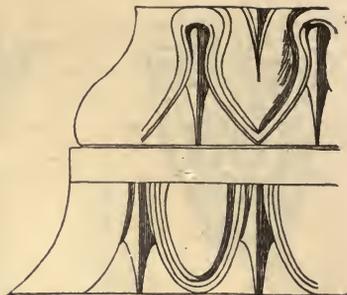


12

EVOLUTION OF THE EGG-AND-DART MOULDING. Illustrated by details from Greek pottery and Naukratic stone carving.—1, 3, 4, Greek pottery, Naukratis. 2, 11, Greek pottery, Rhodes. 6, Italian painted terra-cotta. 5, 7, 9, 10, 12, Greek stone carving, Naukratis. 8, Typical egg-and-dart moulding (late Persian). Nos. 7, 9 and 10, 12 are duplicates, alternately erect and inverted.



Cypriote pottery lotuses illustrating the evolution of the trefoil from the type of the *Nymphaeas*.



Detail from the Erechtheum mouldings.

attachment for the bases of flower and bud, therefore the border is inverted. In Greek vases, for instance, in the Rhodian vase, No. 8 of page 103, the border is inverted at the neck of the vase



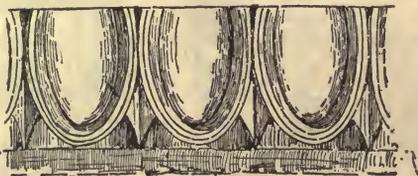
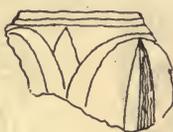
Egyptian lotus trefoil.

because the decorative lines thus widen to correspond with the expansion of the vase. For the same reason the border is erect at the foot of the vase.

We will finally notice once more the alternation of the buds in these lotus borders because these explain the rudimentary survivals of incisions on the so-called leaves of the so-called leaf-and-dart mouldings of the Erechtheum or the painted lines coming to a point on the Italian color border of page 103, No. 6. On the carved lotus trefoils of Naukratis the bud is still seen in palpable form (p. 103 and p. 104).

It is the inversion of the border which obscures its origin; all that is needed to understand this origin is the habit of looking at lotuses upside down.

In its logical element the egg of the egg-and-dart is simply a semi-oval space between two lotuses, the dart is simply the central calyx leaf of the three which make the trefoil. As soon as the trefoil is incised by carving, the necessary result is a series of rounded semi-oval or leaf-shaped projections, between which are the darts or tongues. On the semi-oval or leaf-shaped projections occasionally appear the



Details from Naukratis shown both erect and reversed and compared with an egg-and-dart moulding.

reminiscences of the intervening buds as on the Erechtheum leaf-and-dart moulding. As the Erechtheum moulding shows both the form of the "egg" and the form of the "leaf" it is easy here to see that the "leaf" is only a variant which results from giving a bend to the curve of the side of the lotus. Interesting variants belonging to a more elaborately decorative stage of ancient ornament are seen on Roman frieze motives of the page opposite. The egg-and-dart of the lower frieze is interesting on account of the complete obliteration of the starting point of the motive. In the upper decorative border of this frieze we have a variant



1. GRECO-ROMAN FRIEZE, LATERAN MUSEUM.—On the upper border an incipient egg-and-dart motive, lotus trefoils, not inverted. On the lower border variant of the leaf-and-dart, with small lotuses inserted in intermediate spaces.



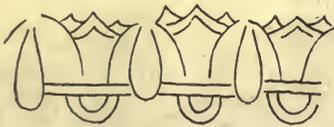
2. GRECO-ROMAN FRIEZE, LATERAN MUSEUM.—On the upper border an elaborated variant of the leaf-and-dart, derived from the motive above. On the lower border the typical egg-and-dart.



Cyprote Greek vases in the New York Museum, with lotus borders suggesting the evolution of the egg-and-dart.

of the leaf-and-dart in which a small lotus takes the place of the dart. Such variants are to be understood as after-thoughts quite independent of the earlier evolution, as far as the small lotuses in the intervening spaces are concerned. In the lower border of the upper frieze an erect lotus takes the place of the "leaf." The upper border gives an instance of low relief incision of an erect lotus border with intervening incisions reminiscent of buds, the whole showing an incipient stage of the egg-and-dart moulding when the lotus border is not inverted.

I was first put on the track of this egg-and-dart evolution by two Cyprote vases in the Metropolitan Museum, still to be seen in the cases. One of them exhibits a rude lotus border and



Sketch from the lotus border on a Cyprote vase herewith. See above.

intervening buds; the other shows the same pattern duplicated by the attachment of a reversed pattern to the one which is erect. This duplication is an isolated case. I have never seen another, but the egg-shaped ovals are so clear on this vase that I took the hint and worked the problem out by recourse to the fragments of stone carving from Naukratis which had then just been published (page 103).

IV.

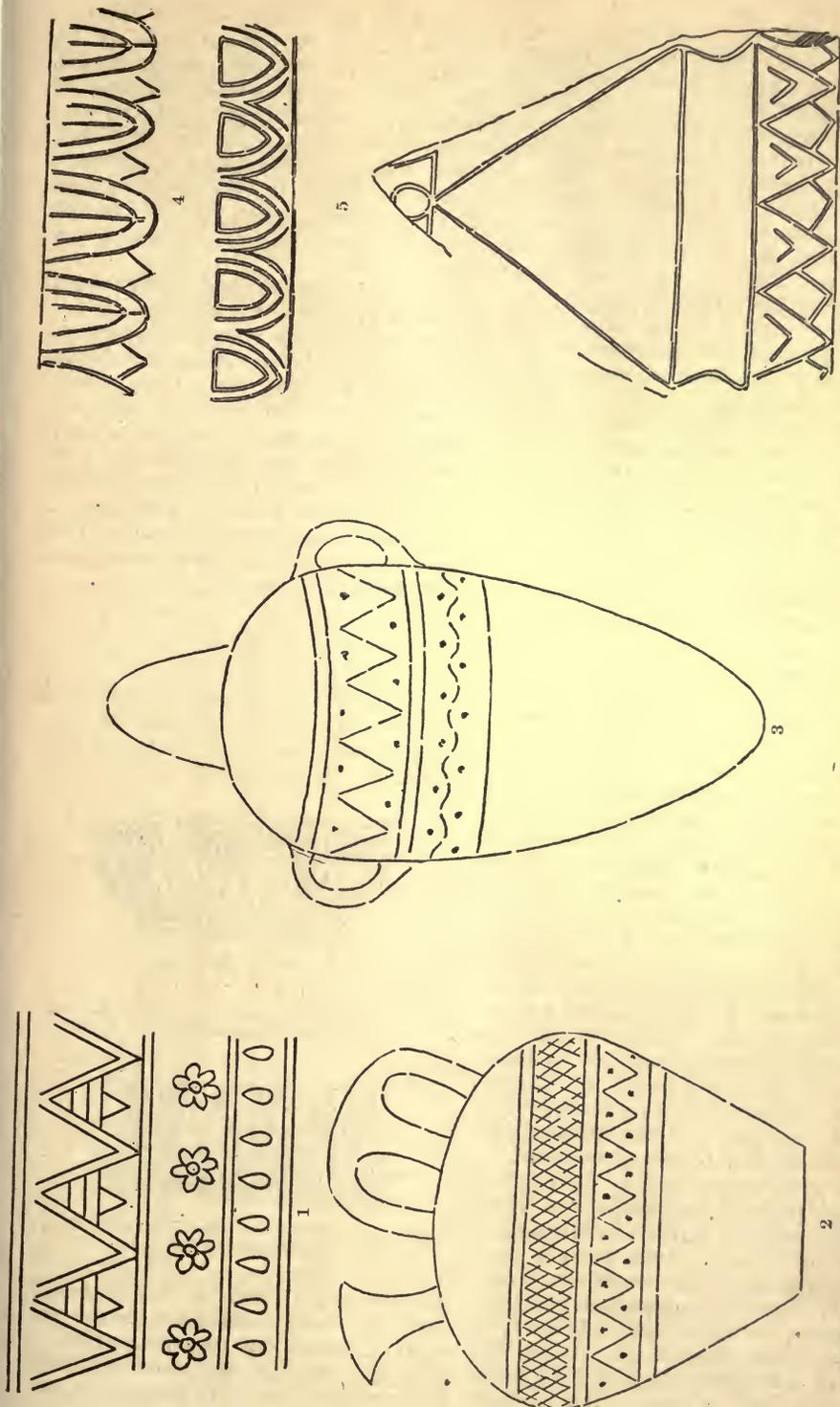
There is an interesting counterpart to this evolution in Egyptian art, viz., the chevron. The evolution of the Egyptian chevron pattern is illustrated on page 107, first by a Phœnician votive tablet of sun and moon worship from Carthage which copies rudely the Egyptian pattern. If the reader will turn this illustration upside down he will perceive a rude series of lotus trefoils, or rather triangles, with rudiments of buds on the intervening triangular spaces, roughly indicated by lines meeting at an angle. The step from this stage to a series of chevrons pure and simple was an easy one.

The pattern of simplified lotus trefoils made with straight lines is a very common one on mummy cases. Various



Inverted lotus trefoils as origin of the chevron pattern. From mummy case in Turin. Author's sketch.

stages of "degradation" of the patterns by which it merges into a series of chevrons are common on the same class of monuments. On the Egyptian pictures of Egyptian vases the chevron pattern thus derived is very common and it still survives on the Egyptian water jars used on the Cook steamers on the Nile and elsewhere commonly used in Egypt. The first thing which I noticed in the first Egyptian hotel I



ARRANGEMENT TO ILLUSTRATE THE ORIGIN OF THE EGYPTIAN AND PREHISTORIC CHEVRON PATTERNS.—1, Detail of a mummy case in the Gbizeh Museum (author's sketch); inverted lotus trefoils, rosettes, buds. 2, 3, Egyptian vases, from tomb pictures. 4, 5, Details from a Phoenician tablet of sun and moon worship, Carthage; pattern of inverted lotuses (egg-and-dart pattern) and conventional derivative. 6, Phoenician votive tablet, Carthage; inverted border of rude lotus trefoils.

ever entered (at Ismailia) was this survival of the chevron pattern on a modern water jar. It also survives on the Kabyle pottery of North Africa (Boston and National Museums), and in other African ornament it is the most commonly repeated motive. In the prehistoric period it traveled all over Europe and forms one of the four typical patterns of the European prehistoric Bronze Age—the others being also Egyptian in origin—viz.: concentric rings, the continuous spiral scroll, the meander and lines of pot-hooks (derived from lines of geese).

I am far from supposing that a chevron pattern might not be derived also from other sources, but the historic continuity and original unity of the chevron pattern in prehistoric Europe are easily demonstrated. How far it traveled outside of Europe we can debate more easily after the meander has been considered, but there is no doubt that the European and Egyptian chevron can be traced through and beyond India at least as far as the farthest confines of the Malay archipelago. Should any one consider this fact surprising, I will suggest that it is not more surprising than the similar survival and present diffusion of the egg-and-dart moulding itself, its transfer from ancient Greece to modern Europe and from modern Europe to modern America. The spread of Greek culture explains the one, the spread of Arab Mohammedan culture as derived from Byzantine and Sassanian explains the other.

To return for a moment to the original evolution of the motive we find an interesting parallel in other forms of the lotus border on Carthaginian tablets. The two borders Nos. 4 and 5 on page 107 are illustrations. One shows the border of inverted lotuses with curved sides. The other shows a series of half ovals from which the central calyx leaf has been dropped. Turn these curves into straight lines and you produce the chevron pattern.

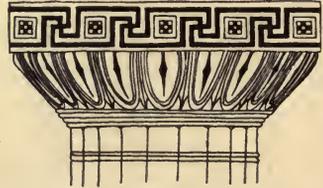
This chevron pattern can be dated at present to the Eleventh Dynasty in Egypt, about 3,000 B. C. This is the date of the mummy case of King Antef in the British Museum, the earliest

monument known to me which exhibits it, but the presumption is of course in favor of a much higher actual antiquity—in view of the scarcity of surviving earlier objects of any description on which patterns are found. This motive also appears on pottery found in Egypt (probably of foreign make) of the Twelfth and Thirteenth Dynasties (excavations of Naville and Petrie).

The most remote form of the lotus border with which I am acquainted is that found on the Assyrian capital at p. 109. The Assyrian base above it, as associated with still more obvious motives on the same page, assists the solution of the motive on the capital. These two Assyrian pieces are the only ones which have ever been published of actual architectural members in Assyrian art and are borrowed from Place. All other instances are taken from relief pictures.

V.

But we have not yet finished with the protean transformations of the common lotus border of buds and trefoils. We have already noticed the



Greek Doric capital showing the rib of the "leaf" as derived from a bud.



Greek color pattern showing the rib of the "leaf" as derived from a bud.

incision on the "leaf" of the leaf-and-dart of the *Erechtheium* as a survival of the bud (p. 104, see also No. 6, p. 103). On the egg moulding from Naukratis the bud still appears in rec-

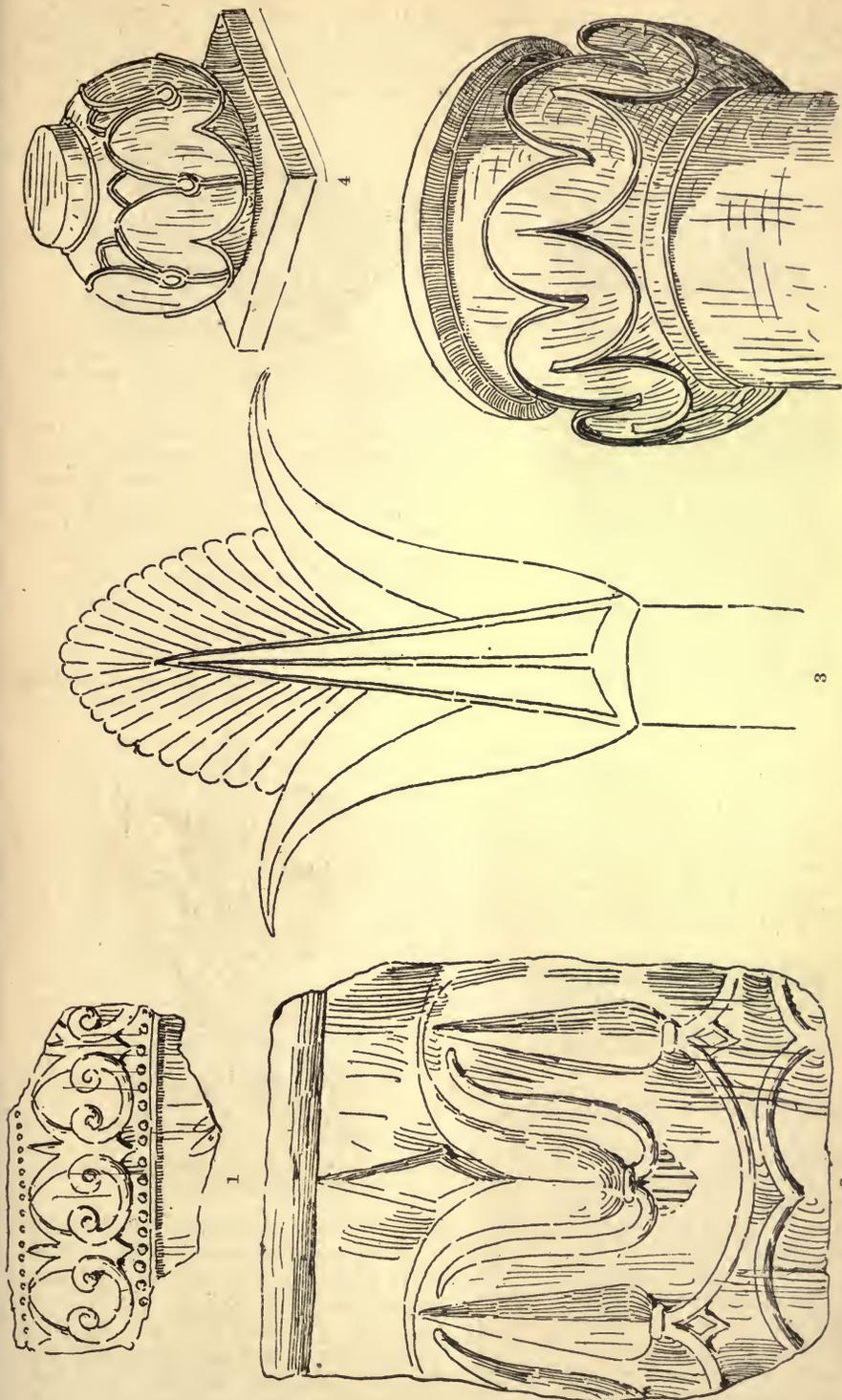


ILLUSTRATION FOR THE LOTUS TREFOIL AND REMOTE ASSYRIAN DERIVATIONS.—1, Greek bronze detail, Olympia; lotus trefoils erect (egg-and-dart motive). 2, Greek stone carving, Naukratis; lotus trefoils and buds; variant of the egg-and-dart motive. 3, Egyptian lotus trefoil, with palmette filling, of the type commonly carved on Ptolemaic capitals. 4, Assyrian base; lotus trefoils. 5, Assyrian capital motive derived from preceding, by elimination.

ognizable form (p. 104 and p. 103, Nos. 7, 9). In the flat leaf-and-dart ornament of the Greek color patterns the bud survives as a straight line forming the central rib of the leaf (cuts herewith).



Greek color pattern showing the rib of the "leaf" as derived from a bud.



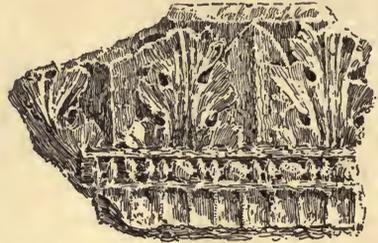
Carved type of the leaf-and-dart (or leaf-and-tongue) dating to the 4th century B. C., showing the expanded form of the rib as derived from a bud.

By modern architectural students and art critics this form with a central rib has been universally mistaken for a leaf. The same mistake, as made by the Greeks themselves, explains the whole evolution of the leaf motive in Greek art. The Greeks of the fifth century B. C. had already transformed the simpler form mistaken for a leaf into one of elaborated design with serrated edges—witness the border moulding of the door of the Erechtheum, which is still in position (cut herewith.) The tell-tale dart or tongue still



Leaf-and-dart border from the door of the Erechtheum—derived from a border of trefoils and anthemions.

survives between these "leaves" to tell the story of the lotus trefoil evolution. In the Roman period of Greek ornament the frequency of leaf borders with intermediate tongues (p. 111) testifies to an earlier frequency in the Greek originals which are not as numerous in survival, but we are fortunately able to point to a serrated leaf border with the surviving intermediate tongue showing a derivation from the



Leaf-and-dart border found in the Pronaos of the Zeus Temple at Olympia. Supposed to have belonged to the pedestal of the hoises of Cynisca.

According to these indications the introduction of the "acanthus leaf," so called, into Greek art was by way of these leaf-and-dart borders, whose evolution has just been described in connection with the egg-and-dart.

The tendency to realistic and decorative transformation in the direction of the leaf motive appears also in the anthemion as early as the time of the Erechtheum—witness the base of the detail herewith. By the fourth cen-



Anthemion of the Erechtheum showing the introduction of a foliage motive at the base.

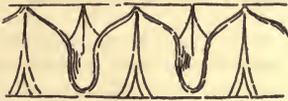
tury B. C. the foliage detail had spread over the entire motive (see p. 98, Nos. 3, 4, 5). Instances from the Roman period like the details of p. 112 still bear the tell-tale signs of lotus trefoil origin, and these details are, in fact, portions of borders whose arrangement leaves no doubt as to

origin. The association with the anthemion is of course convincing proof of the traditional origin in another attendant illustration (p. 99). As regards the foliated treatment of the spiral scroll

I must reserve my remarks until the simpler motive has itself been considered, but I introduce one illustration here to indicate an incipient stage of the foliated scroll which still shows its lotus trefoil. Later and more elaborated stages on p. 105).



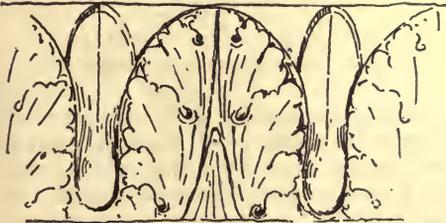
Lotus spiral from Thasos showing an incipient stage of foliated decoration.



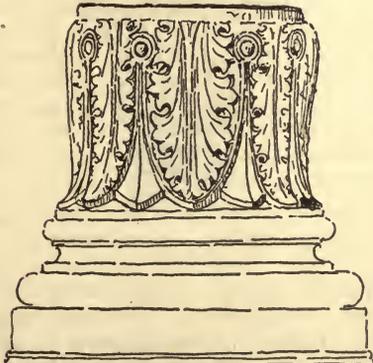
Greco-Roman leaf and dart border. From Pompeii.



Evolution from the above type. Greco-Roman border of Pompeii. From author's sketch.



Evolution from the above type. Greco-Roman. From cast in the Metropolitan Museum of Art



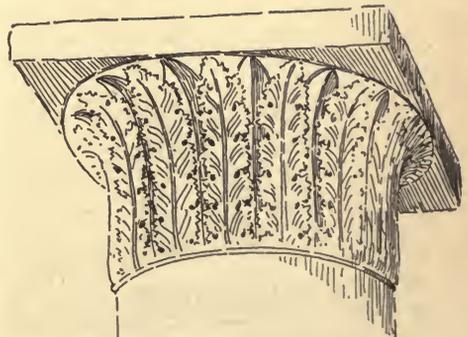
Counterpart to the above type, inverted. Greco-Roman base. From cast in the Metropolitan Museum of Art.

We come now to the Corinthian capital, whose earliest perfectly defined example is that of the Choragic Monument of Lysicrates (334 B. C.). In the capital of the Choragic Monument the volutes are still the essential feature of the capital and the leaves are an afterthought—an overlay. That the Corin-

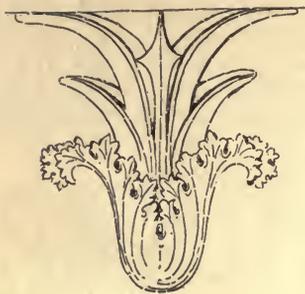


Corinthian capital of the Choragic monument of Lysicrates.

thian capital is in these volutes an evolution from the Ionic is perfectly clear when we once grasp the fact that the Ionic volutes were originally parted in the Ionic capital and that their upper line of union was a highly conventional transformation. When capitals with separated volutes like those of page 91 are seen not to be departures from the traditions of the Ionic, but to be the most exact survivals and perpetuations of its earlier forms—then the capital of



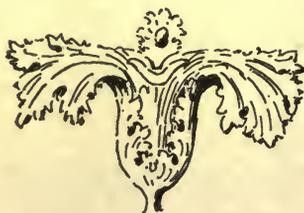
Undated capital at Jerusalem.



Foliated lotus from Thasos.



Foliated lotus. Detail from a carved border in the court of the Naples Museum. From author's sketch.



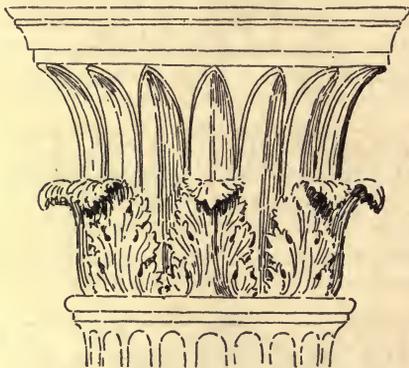
Foliated lotus. Detail from a carved border in the court of the Naples Museum. From author's sketch.



Foliated lotus. Detail from Renaissance stone carving.

the Choragic Monument becomes simply a decorative elaboration of them.

We come now to the leaves of the Corinthian capital. Were not their prototypes found in the traditional ornament of the leaf-and-dart type (like the Olympia moulding, p. 110), or were they seized off-hand from visible nature? If so, it was the first abrupt step ever taken in Greek ornament outside the line of traditional evolution. We are able to fortify our position regarding the Corinthian capital by an illustration from Jerusalem of uncertain date (p. 111), closely analogous to the more highly elaborated leaf-and-dart borders.



Capital. Tower of Andronicus Cyrrhestes.

As regards another primitive form of Corinthian capital, viz., that suggested by the upper part of our illustration from the Tower of Andronicus Cyrrhestes, in which the leaf appears as a tongue or rib of simple outline—there is an



Egyptian basket capital; from Wilkinson.

Egyptian capital of the basket form which furnishes an obvious suggestion. Take the color pattern of erect lotuses on this Egyptian capital and incise it and you will produce the simple

leaf pattern of the primitive Greek bell capital. The spaces between the lotuses will appear as leaves or ribs after incision of the former. There is no surviving actual example of this Egyptian capital, which is copied by Wilkinson from a tomb painting. I am inclined to lay considerable stress on this suggestion. From this point of view the Jewish capital already illustrated (p. 111), and its significant location in relation to Egypt are also interesting.

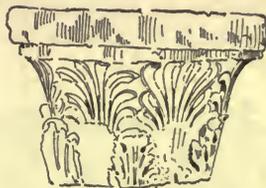
The matter of this section will carry most weight with those who are best informed as to the gaps in the record for original Greek architecture, and who are best informed as to the strict lines by which the styles of Greek decorative art are limited according to the sequence of periods. Although the simpler motives are all continued in the later periods a given amount of elaboration always implies a given date, before which that elaboration was unknown.

According to this sequence of evolution every expert can differentiate the art of the sixth century from that of the fifth, the art of the fifth century from that of the fourth, and the art of the fourth century from the Greco-Roman.

When this gradual evolution from decoration in flat to higher and higher projection; ending in the late Roman undercutting; from the plain and simple to the decorative, from the decorative to the highly ornate and complex—is once grasped and understood, then the gradual steps by which the simpler motives of early Greek art were transformed and modified into generalized floral and foliate forms, become a part of the axiomatic matter of the history of art. The anthemion (p. 110) of the Erechtheum, the leaf border of the Erechtheum and the leaf-and-dart border of Olympia (p. 110) all demonstrate the initiation of this movement a whole century before the Corinthian capitals of the Choragic Monument which are the first to show an isolated and distinct so-called acanthus. Meantime the anthemions of the Athenian tombstones illustrate a farther advance in the same foliating treatment (p. 98). The leaf borders of the Greco-Roman period, apart from the Corinthian cap-

ital are *all* demonstrably evolutions from the simpler leaf-and-dart as proven by the survival of the dart or tongue—see the illustrations of p. 111.

The question then which I leave to the expert to consider, is whether a typical foliating treatment, more and more serrated, more and more elaborate, gradually penetrated into Greek art by way of the leaf borders whose lotiform evolution is incontestable, or whether



Proto-Corinthian capital of Asia Minor.

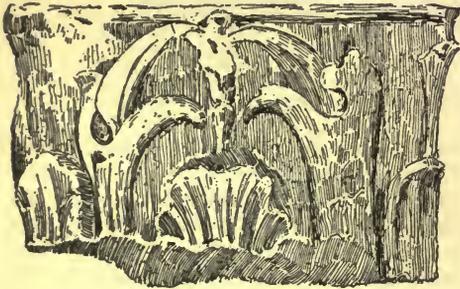
aside from this progressive and traditional movement the leaf of the Choragic Monument sprang into being as the first instance of wholesale and unmitigated realism which Greek ornament at that time could illustrate. If the acanthus of the Corinthian capital be really an acanthus to start with, it is a surprising anomaly in the history of Greek art. But a still more surprising



Proto-Corinthian capital of Phigalia; about 430 B. C.

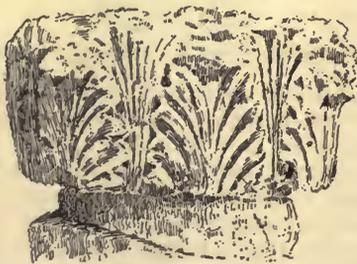
thing would be that it never is an out and out acanthus excepting when it appears on a Corinthian capital. Its appearance without the intermediate tongue might be explained as one more decorative elaboration of a lotus Ionic evolution (for at bottom we have seen that the Corinthian capital is Ionic). If the acanthus sprang into being as an independent motive, why do we not find it independent elsewhere, aside from the Corinthian capital? Considering the Corinthian capital as an evolution from the Ionic, we may assert that there is no

case in Greek art in which an acanthus pure and simple is found independent of a lotus motive, and no instance outside the Corinthian capital (however its leaf may be considered) in which the motive is not a lotus motive, transformed by a foliating decorative evolution. On the whole I consider the question to be settled by the Proto-Corinthian capital of Phigalia, which dates a hundred years before the Choric Monument, whose leaf is evidently the predecessor of the leaf of the Choric Monument and whose leaf is palpably not an acanthus (p. 113).



Proto-Corinthian capital of Delos. From Blouet.

The capital from Delos is a very curious and very important illustration of Proto-Corinthian evolution. I am doubtful whether the drawing, as made from the broken original, would not have been a better one if the artist had been familiar with the form of the double lotus, whose horns project on either side over the central smaller leaf

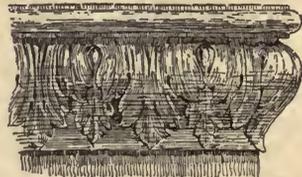
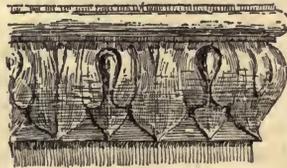
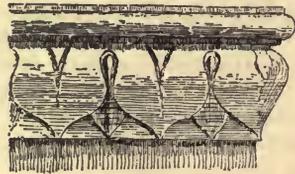


Proto-Corinthian capital of Messene. From Blouet.

anthemion. It is not clear to me whether an entire double lotus has simply been damaged by breakage and the artist has finished off the drawing in a rather crude way along the line of

breakage, or whether these curious horns are exactly represented from the original. In either case we have a clear case of anticipation of the arrangement formed on the capital from Messene and a clear case of lotus transformation (in the capital of Delos). The Proto-Corinthian capital from Phigalia, dating about a century before the Choric Monument, is also a highly important piece of evidence. Its leaves correspond, in their primitive simplicity and lack of elaboration, to the leaf of the Erechtheum border of about the same date, that is of the border on the door (pp. 110, 115). The capital of Phigalia is otherwise a clear case of Ionic transformation, when the original Ionic is once understood as having had parted volutes.

I shall close this argument on the acanthus by calling attention to the three coping motives from Rajpootana



Hindoo coping motives from Rajpootana; arranged to show the evolution of the acanthus motive from the leaf-and-dart.

as illustrating the evolution of the acanthus motive from the leaf-and-dart. The publication from which these motives are taken is a colossal and astounding monument of the dominance of Greek details in India through Mo-

hammedan Arab and Buddhist transmission and for the relations of India with the Greek States of Bactria.* We will, however, consider these motives without reference to their interest as being from India and as we should if they were actually themselves Greco-Roman, for in Greco-Roman art they all have their exact counterparts. The evolution which these motives represent is a clear one; the survival of the simpler motive besides the elaborate outcome is already familiar to us. These three borders represent the evolution which took place in Greek art during the fifth and fourth centuries B. C., and are all perpetuations of motives dating from that time for which we are able to show counterparts and equivalents within the limits of that time.

Although the transformation effected is a somewhat obscure one on account of the deficiency of a large number of monuments of the original period we are able to say that there are two elements to be considered in this evolution: First, the lotus border with anthemions is an important factor, as represented by the Erechtheum door border (p. 115).

I have repeated here the illustration of this Erechtheum border in order to connect it with a slightly antecedent stage of evolution as represented by a border from the Island of Thasos. I do not claim an earlier date for the Thasos border, I only point out that its original ancestor precedes in evolutionary order the Erechtheum border.

The "acanthus" developed from such a border of alternate lotuses and anthemions. Second, the multitude of simpler leaf borders in early Greek art represented by the leaf-and-dart motive (surface or flat phase of the egg-and-dart) assisted the evolution. Once for all the leaf was there; how far that leaf should be serrated and elaborated was a question of taste and this taste was a question of period.

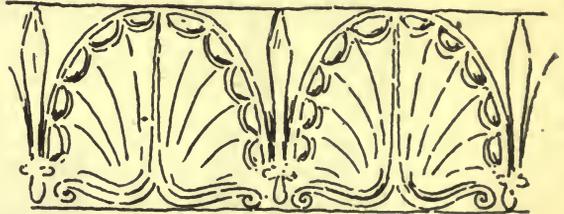
The time of the Corinthian Order after 330 B. C. was the time of opulence and luxury and decorative elaboration. It is consequently the time in



Typical border of anthemion and lotuses. From Ægina.



Evolution from the type above. From Thasos.



Evolution from the type above. Door moulding of the Erechtheum.



Evolution from the type above. Greco-Roman. From cast in the Metropolitan Museum.

which the acanthus phase of the typical leaf was the one largely preferred. But side by side with it continued to subsist the more elementary forms of the same motive, among which the egg-and-dart is not less curious and not less apparently remote from the original form.

I must add that most of the drawings within the limits of this section were prepared by Mr. John W. McKecknie

*Jeypore Portfolio of Architectural Details, by Jacob. Quaritch, 1890. Published under the patronage of His Highness the Maharajah of Jeypore.

for the Grammar of the Lotus but that its press-work was too far advanced to allow of their use, after they were made. I did not consequently consider the acanthus in the Grammar of the Lotus and therefore also omitted from that work any mention of the Corinthian capital, considering that it would

be impossible to treat its otherwise simple problem without reference to the leaf enrichment.

My first announcement of the lotiform origin of the acanthus leaf motive in Greek art was made in the first Paper of this series and this is the first publication of the proof.

Wm. H. Goodyear.

(TO BE CONTINUED.)



GREEK MELIAN VASE, 7th century B. C.; Athens; showing spiral scroll variants of the anthemion.

RAYMOND LEE.

CHAPTER XIX.

UNREST.

HITHERTO Raymond's curiosity about his father had not begotten the slightest inquisitiveness concerning his parent's appearance. Even a desire to educe by mental photography a portrait, however vague, had never troubled him. In his cogitations so far, his progenitor had been for him merely a vague personality, the centre of an unpleasant, dubious set of facts. His mother's persistent reticence about the past, at the time the boy's mind was furnishing itself with its beginnings, joined to the fact that when curiosity concerning his parent was evoked the interest aroused centered itself violently in a certain set of actions rather than in the man partly accounted for Raymond's ignorance. But only partly.

For the rest, Lee willfully closed his eyes. In adopting an attitude of hopelessness concerning his "prospects" in life, those immense possibilities which fill in a young man's outlook until he is thirty, Raymond deliberately turned his back on his childhood—purposely exiled himself from interest in it as one might from one's country to which return is become not only impossible but unpleasant. But though the door was closed in this way it remained visible, and every glimpse of it insisently suggested that there was something behind it. Despite Raymond's exaggerated sense of implication in his father's fate there was nothing morbid in his temperament. His nature reacted energetically against the demons of depression, in struggling with which we all waste so much of ourselves. The

wind, however, blows whither it listeth in the memory as in the world and strikes some tone from whatsoever it toucheth. Despite his efforts a sad fretting note rose frequently in Raymond's ear claiming the audience he refused it. The defeated association with Marian awakened it with painful plaintiveness, and Pulling's off-hand suggestion that the face now twice seen might be his father's, intensified it.

Was that ferocious, fear stricken face his father's? Raymond asked himself again and again. What was the background to the apparition? And of the moment and the occasion when this inexplicable visitor thrust himself into an obscure corner of his mind, how much was it possible by search to discover? Or, and the thought occurred to Lee repeatedly as an anti-climax to his perplexing speculations, was this suggestion of Pulling's about suspended memory, after all, nothing more substantial than other vagaries with which that eccentric individual sported? This possibility invariably upset Raymond at the point of determining upon action—a point at which he found himself several times during the twenty-four hours succeeding the conversation in the forest.

That Sunday night he tossed upon an uneasy bed, searching for some firm conclusion as to the value of Pulling's theory. In the course of their talk Pulling had declared emphatically that the face could be related to no ordinary event in his career.

"The ordinary doesn't return in that extraordinary way. Follow it up Lee, you never can tell into what strange places this sort of business leads one. It's great fun."

Raymond was doubtful as to the amount of pure amusement investigation of this particular matter would yield him. The old fear revived that search into the past would ultimately lead him into unpleasant discoveries. He shrank from certainty.

When Raymond called at the post-office on Monday morning, for letters, he had succeeded somewhat in checking the force of the backward drift of his thoughts and had partly brought himself around to his former position of sturdy acceptance of his situation as he found it, when the following letter again cut the ground he was standing upon

from under his feet. As soon as he saw the postmark, and the familiar handwriting of Mr. Wart on the envelope, he was aware that peace of mind was threatened :

“ MY DEAR BOY—

“ The grateful news—can you imagine how we have welcomed it?—of your whereabouts reached us this evening in a letter from Mr. Winter. Bless him for it. I cannot tell you how miserably empty the hours have been for us since your departure. They are terrible, these affections, when they turn against us and are no longer our companions, but empty-handed supplicants. The Princess’ cheek has become pale and her old sweet seriousness in which were blent the warm, changeful colors of her life is blanched to a white sadness which I am sure would pain you to witness. As to the old man, for him life is again pressing under foot the old bitter grapes.

“ When we first found ourselves forsaken we agreed like children to ‘make believe’ that you had left us for only a little while. We said you would be back again in a short time. Every evening the Princess came to see me and always we soon found ourselves talking of you as though your being out of hearing for a little was an opportunity and excuse for freer speaking about you than usual. This fiction would cheer me up, she thought ; but though we struggled to be gay with one another the attempt brought little comfort. It did, however, bring the old man’s heart so close to her’s that the two touched, and I felt how deeply her’s was beating for you. The effort at delusion came to an end dolefully one evening when she sobbed herself to quietness on the old sofa, confessing to me that she loved you even in those early days in St. Michael’s. I told her everything of your past. I ventured even to speak of your affection for her and added that you had left us because of the past. She looked at me through her tears and cried, ‘As though it mattered.’ Ah ! sweet Princess, the old man could bow himself before you to the hem of your garment. When I showed her your last letter she begged me to permit her to keep it. It will be a great wrong, my boy, if you continue in your present course, for truly it is painful to mark the change that is working in her you love—the growth of a sad constraint, a certain air of hopelessness.

“ She was with me when Mr. Winter’s letter arrived. It chilled in places. The urgency with which he begs us to appeal to you to return seems to indicate an obstinacy on your part to follow your own way. Surely that cannot be Raymond? You *must* return to us. The Princess her-

self, without saying one word to me beforehand, purchased the ticket which I inclose in this for passage on a steamer sailing from New York on the twentieth of next month. When I asked her what message I should send to you with it she answered, sadly :

“‘Only tell him to please forgive me being officious. I bought the ticket fearing he might wish to return and not be able to.’

“‘Could she say more? Certainly I cannot add anything to urge you homeward. Need I say the old man’s heart calls you; but an even greater love bids you come, and I can only hope that its supplication will prevail should my prayer fail. Send us one word, Raymond, and then come to us. God bless you.’”

When Raymond, refolding the letter, paused for a moment to gaze affectionately at his old friend’s trembling signature, he felt conscious of the fact, without at the same time facing it squarely, that he had commenced to surrender. True, he did not definitely acknowledge capitulation, it was a matter yet to be thought of seriously. He would not permit himself to bound in one leap to the conclusion he foresaw. His judgment was to be forced to travel at a slower pace than his feelings; but, despite himself, those feelings were ahead of his decision exulting in the possession of long deprived freedom.

Raymond was happy. He read and reread the dwarf’s letter. Each perusal intensified the melody of the love message it contained. It seemed to chase away the old doubts. “Why had he ever allowed himself to be so tortured by them,” he asked. “If Marian could view that past without shrinking from it, as a sad affair, no doubt, but nevertheless as an affair ended, surely he must have been grossly exaggerating his relation to it. Such consequences as it had had for him were they not entirely of his own creating?” He recalled to mind that no one of the few that knew his secret adopted the view of his position that he had taken. Mr. Fargus had endeavored to turn him from it as unreasonable, Mr. Wart had done likewise, and now came Marian with an even more personal and interested judgment to the same effect.

But might they not be wrong? They were interested judges. There was the danger. Our interests are capable at all times of making ground for themselves to stand upon.

"I must decide for myself," thought Raymond, but at the same time he felt that his decision was already made; and he was happy.

And happiness, which is to be on good terms with life and the world in which we move, put Raymond for the rest of the day into a delightful intimacy with his surroundings. Ordinarily, human nature, as exhibited in *Catch-On*, was genial and instructive, chiefly upon beery lines; nevertheless it revealed new points for interest and sympathy under the sunshine in the young man's eyes. Its crudity even, which had been so depressing, became less of an irritant, more a mere phase of the place. Raymond's discovery of a road that promised departure from the town beautified it.

But the forest, the deep, silent forest, where the long aisles of trees seemed to lead in every direction to greenlit, mysterious haunts, where each step inward was attended by a sense of withdrawal from the world to one's own intimate self, it yielded to Raymond the finest sympathy with his newly-found happiness. He passed the afternoon wandering in the woods while his thoughts circled about in the new prospect before him. Every sound became suggestive and passed as a voice into the dreamy atmosphere of the young man's reverie, a woodpecker's staccato hammer on a hollow tree cried "Re-turn," "Re-turn," and a bluebird's plaintive call to its mate was laden with his name.

"Return, why not?" was the result of his cogitations. "The future is not all clear; but like a road in a fog will it not open before me as I proceed?"

Raymond decided that he would go to Pittsburgh and talk the matter over with Ralph. It was Ralph's letter that had disturbed his determination to keep the seas between himself and Eastchester. Raymond would have started by the train that very night for Pittsburgh but there was the appointment with Pulling. He had promised to be with him at six o'clock to prepare for the clandestine visit to the Fluke well. At that moment Pulling, in a great state of excitement, even for Pulling, was hunting for him everywhere. The idea that Lee was in the forest ruminating over a love

affair never occurred to Pulling, who was greatly agitated by the news, obtained through a devious channel, that the well would be "drilled in" that night.

CHAPTER XX.

AT THE FLUKE WELL.

IT was after eight o'clock when Raymond and Pulling stole out of the boiler-shed of the Jim Crow and entered the forest.

Every circumstance of that expedition impressed itself so vividly upon Raymond's mind that he was able, afterwards, to recall each successive rhythm of the changing current of sensation with which—the metaphor is scarcely too violent—he was borne along. There are moments of mental elation when the feelings are so tense that they almost make their own music and move as they never can in the denser atmosphere of the ordinary to infinitely subtle suggestions from things. The clumsy senses, usually of so monotonous expression, then acquire an ethereal sensitiveness and become musical strings of exquisite delicacy, so that mere perception is a sufficient touch to set them harmoniously vibrating.

At the starting out that evening, as Raymond entered the forest, the cool, scented exhalations from the earth set his pulses moving to a quicker measure. The air was instinct with life. The sensation that every leaf was expanding in the evening freshness was irresistible. A faint green luminosity amid patches of darkness lingered under the over-arching branches, the last melancholy presence of the dying twilight. Here and there in the vistas of the forest colonnades the purpled crimson of the western sky flared in dusky bars or burned in fire-like halo. The forest presented a sombre, solemn, grotesque air, as though the trees imprisoned, enchanted, metamorphosed by the light were, in the darkness and secrecy of the night, assuming one by one their towering human forms to meet in god-like conclave.

Once or twice a lone note of a bird filled the quiet with sad, lingering sweetness. After a quarter of an hour's tramp the only sounds Raymond could hear were those that arose from his and his companion's footsteps.

Pulling had elaborated an order of tactics for the expedition. He explained at the outset that to reach successfully the object of their nocturnal sortie it was necessary to avoid it.

"I've been studying this business," he continued, showing Raymond a hieroglyphic-like chart of his own manufacture. "That spot, there, is the Fluke, and that circle—not the inner line, *it's* supposed to be rubbed out—but the thick one, is the boarding around the well. If we went straight for it from this point we would walk right on to it in full view. We couldn't slide from tree to tree without some of those fellows getting on to us. But"—Pulling screwed up one side of his face, a proceeding which Raymond was expected to regard as a wink of intense slyness—"on the other side—the off side—their stockade almost tumbles over into Little Coon Creek. I've been there reconnoitring. It stands on the very edge of the bank, which is about ten feet high. The whole country slopes away from the north side of the well. My scheme is to circle around, strike Coon Creek, then steal along the high bank until the well is right over our heads. Then we'll creep up and mine a hole somewhere to peep through. See? What do you think of it—ain't bad, eh? Been working at it for a week. Come on; not a word. This damn night air is like a telephone. Wish it was raining."

The forest darkened, puffs of cool air became more frequent and suggested to Raymond the hurrying by of some nocturnal wanderer. With each step forward a sense of the mysterious deepened. It was easy to fancy as the gloom deepened and the outline of objects became blurred against a black background that the two were in reality descending into the earth. Here and there where the foliage opened and revealed the stars the heaven appeared at a greater altitude than ordinary.

Pulling groped along in the lead. The something uncanny and supernatural in the man never struck Ray-

mond so forcibly as it did as he followed him almost step for step. Not a word was spoken by either, but once or twice when Pulling feared his companion had lost touch with him he uttered a low breathing through his teeth, not unlike the sighing of the wind.

After more than half an hour's tramp—the pace was necessarily slow—the creek was reached. The two slid down the bank boy fashion, the earth yielding under them, and then began to skirt along the creek side in the direction of the well. Fortunately there were only a few inches of water in the Coon, the bed of which was wide and tortuous. Indeed, only after heavy downfalls of rain was it ever completely covered. Still, Raymond could hear it purling over the stones and occasionally he found himself over his boots in water, a warning to keep a higher foothold on the sloping side.

Progress in the oblique attitude thus necessitated was particularly slow and arduous. The detour they had undertaken made the distance to be traveled nearly three miles. Raymond was painfully fatigued and trembling in all his lower muscles, when Pulling came suddenly to a halt, stopped by a faint yellow reflection of light amid the trees high above them a few hundred yards away.

Raymond discovered that his companion had halted by tumbling upon him. Pulling in great excitement hissed profanity.

"Crawl," he whispered. "Low down, keep in the dark."

Pulling dropped on to his hands and knees. Raymond followed his example. In this way they approached the well. Motion in the lizard fashion is anything but easy or pleasant. The declivity of the bank perpetually threatened an upsetting—the tangled roots of trees and shrubs, interwoven with climbing plants, dead leaves of innumerable summers and fallen branches and twigs formed painful impediments that tore the clothing and lacerated the hands. Repeatedly the earth gave way and rolled down into the creek. At each of these mishaps Pulling swore violently. He was excited almost to frenzy. The situation certainly was thrilling. As they neared the well Raymond felt his heart beat with uncomfortable rapidity.

There was not only a large measure of excitement in the unusual circumstances of a midnight marauding for forbidden secrets, but the element of danger was also present. Raymond knew that without hesitation or compunction whatsoever the guardians of the Fluke well would announce with the contents of a shotgun their discovery of any surreptitious intruder. The "scouts" around the well were armed, and their guardianship was not an ornamental parade. Raymond's acquaintance with Lawler's enterprises of a similar character had demonstrated to him how carefully and violently well-owners kept the curious at arm's length from secrets of cash value. He was quite prepared to find Pulling's expedition come to ignoble or disastrous defeat.

But that worthy had either calculated well or was aided by good fortune. Step by step the two spies crept along without detection until they were within a few feet of the stockade around the well. Pulling stopped and lay prone along the ground in order to listen. The bank upon which they were stretched was completely in shadow, but from within the inclosure above them the light of the flaring gas shot up into the trees and made a wide illuminated circle on the forest foliage. The effect was weird, and suggested an Indian encampment and strange midnight orgies. The sibilant noise of steam escaping at high pressure drowned all other sounds. The air trembled and the leaves shivered with the vibration. The quiet forest seemed to be listening in wonderment.

After a few minutes' pause Pulling, followed by Raymond, began by cautious inches to move upward to the inclosure. He halted suddenly a dozen times as though warned of danger—on each occasion Raymond felt his heart leap into his throat. Not a soul was visible, however, and the noise of the steam, which buzzed louder as they approached it, was the only sound audible. One might have imagined the well was deserted.

At last, by stretching up an arm, it was possible to touch the rough boarding. Pulling signed to Raymond to find some point of observation without moving further, while he proceeded to the other end of the stockade. Raymond

watched Pulling intently until he dimly saw him fix himself in a perpendicular position a few yards beyond and raise his head cautiously above the brink of the creek bank.

When Raymond did likewise his eyes at once caught a thin line of light streaming from between the boarding a couple of feet above him. It invited inspection. He found a foothold on a projecting stone, and raising himself to the necessary altitude peered through the crevice.

Within the inclosure all was bright as in a theatre—the great wooden tanks like huge vats, the long boiler like a stranded locomotive straining and hissing, the complication of iron pipes of different sizes, some inert, others throbbing under pressure of the steam which leaked in little mist clouds from every joint, the long fountain of flame that rushed with a scorching sound from the top of its iron pole, and in the centre of the circle the guillotine-like derrick, suggestive of some outlandish fetish whose rites were celebrating. Entangled amid interlacing timbers was the “walking-beam,” resembling a huge battering-ram, nodding up and down with that tireless, regular, implacable motion which imparts to the movements of machinery a numbing power upon the senses. Raymond counted seven men within the inclosure. Several were clothed in yellow oil-skin suits like seamen prepared for a strong “sou’wester.” They were drenched with oil, and as they moved about in hurried motions—plainly great excitement was prevailing at the moment—they reflected the ghastly brilliancy of the flickering light as though they were queer amphibious fishes. The strangeness of the scene absorbed Raymond’s attention instantly. The pressure of the purpose and circumstances of his visit, which a few moments before was like the tightness of cords about him, was relieved. He lost himself like a spectator of a play.

Clearly it was a critical moment with the actors within. Everyone was running to and fro with the confused movements of hasty preparation. Energetic gesticulations betokened speech, but the steam drumming in an empty tank, a device calculated to prevent interlopers gathering any information by their ears, completely overwhelmed the voices. Twice someone approached Raymond’s peep-hole

and caused him to withdraw his eye with a start that almost threw him off his balance, and once when a door not observed by him opened in the palings but a few paces from where he was stationed, to admit an armed man, Raymond experienced a sickly sensation of the danger of his position. He peered in the direction of Pulling, but at first, his eyesight dimmed by the brightness of the spectacle he had been gazing upon, could not discover him. The doubt followed :

“Was he alone? Had Pulling deserted him?”

The quietness of the forest seemed to press in upon him on all sides and to touch him as though it were a material thing. He shivered. Above, in the trees, the light pulsed and wavered at times as if the violence of the uprising gas would extinguish the flame and throw everything into darkness. The topmost part of the boarding was in a faint penumbra. Below, the air was black, save for a few points of light that burned through the inclosure. Kneeling to the ground Raymond peered into the darkness. After a time he discovered, at the spot where he had seen it last, the shadow of Pulling. Watching intently he perceived it was a busy shadow, a shadow whose members were moving beaver-like with intermittent moments of cessation.

“What’s the fellow doing?” Raymond wondered. “Digging?”

A hazy light suddenly shot down the bank from *under* the foot of the stockade.

“Could it be that Pulling had the insane intention of creeping into the inclosure?”

Raymond marked the opening enlarge by the expansion of the light that passed through it. Then he clearly perceived Pulling bend his head down and thrust it up into the hole he had made.

“Fool,” cried Raymond, inaudibly, “you’ll be seen” (the judgment, let us say, did injustice to Pulling’s circumspection, for within at that spot stood a tank).

Trembling with excitement Raymond quitted his foothold, intending to save his companion from the imminent discovery he foresaw so clearly.

Before he had taken a step, to his dismay, he saw the tall

plank that rose above Pulling's head oscillate for a moment, stagger like a drunken man, and then with a snapping of rending timber fall outward and crash down into the creek.

A flood of light poured out of the opening into the forest.

Raymond's first fear was concern for Pulling. Had the falling timber injured him? Disregarding caution, which he concluded had become useless, he cried aloud to his companion. No response came. The thought flashed upon Raymond that Pulling had been knocked unconscious into the creek. With a couple of bounds he reached the spot, now brightly illuminated, at which he saw Pulling last.

He was seized instantly by two men who leaped upon him through the opening in the inclosure. Before he could utter a word two pair of hands like vises gripped his arms. Raymond struggled fiercely to liberate himself.

"Let me go," he cried, breathlessly, "my friend is hurt."

"Damn your friend and you, you skunks," screeched a voice. "Bring him up here. Who is it?"

The enraged speaker evidently was the commander of the company. He stood on the brink of the declivity with his back to the light, surrounded by the well's crew. His features were invisible. Clothed in a black rubber coat with a crumpled slouch hat on his head he appeared as a dark silhouette against the flare of the gas.

Raymond's captors dragged their prisoner with brutal energy up the bank and forced him to a foothold on the brink, face to face with the master of the well.

"You skunking, prying devil," hissed the latter. "Let go his hands. Who in hell are you?"

"That's my business," replied Raymond, sullenly.

"You're business, eh? You're business! Are you prowling round here on your business, you miserable skunk?"

"I'm not interested in your affairs. I was with my friend and he's below there—dead, for all I know."

"Serve him right. Who are you? Damn you, tell me. I will know."

"I won't," cried Raymond.

"You won't!"

His inquisitor sprang at his throat and in an instant

the tightened fingers had almost choked him. The constricted blood pulsed violently in Raymond's neck.

Raymond struggled like a drowning man for breath. He freed himself for a second, and as he did so the light shone full into the face of his antagonist.

It was the face he had already seen twice as an apparition. The eyes shone into his, bright like copper, and with murderous ferocity. The distended veins on the forehead were like cords. The visage was purple with apoplectic rage. The high stockade and the forest—the actual background of the scene—vanished from Raymond's sight and was replaced by a large gas-lit room, the high windows of which were closely draped with heavy yellow curtains that were suspended under dark wood cornices with deep valances. Every detail of the furnishing of the apartment flashed into view—the marble fireplace with the great gilt glass over it, the bright steel fender around the grate, the ample expanse of carpet, dotted with patterns of big bunches of flowers, the chairs upholstered in yellow stuff, the pictures with their gold frames hung on the walls by heavy red cords, the huge wardrobe with a looking glass in the door of it, and the dressing table covered with china articles.

Standing before him and towering above him was a man dressed, not in a black waterproof, but in a light suit, whose terrified and ferocious face, peering into his, was the face which the light of the hissing gas had revealed to him that moment.

Then he heard, like a cry in a dream :

“Pitch him into the creek.”

The room and the face were suddenly extinguished in darkness.

CHAPTER XXI.

THE SEARCH COMMENCED.

WHEN consciousness returned Raymond found himself in bed in one of the scantily-furnished rooms of the Catch-On House. The process of awakening was slow. It was like an emergence into the daylight, attended at the first stage by only dim perception of strange surroundings—indistinct outlines of dark furniture and hazy sunlight streaming in through a bare window—followed by more emphatic impressions that aroused the mind to questioning. Sensations of fever and thirst succeeded, then dull, hot pains and a sense of exhaustion.

“What can I get for you, Lee? There, don’t move about.”

The voice was Pulling’s.

Raymond endeavored to utter his friend’s name as token of recognition, but the sound died in the intent.

“Don’t try to talk. You’re all right, except in one or two small particulars. Let me arrange your pillows—so. That feels cooler, doesn’t it? Doze off again. You’ve got to sleep and eat for a fortnight, and you’ll be all right.”

Drowsiness again enveloped Raymond like a fog, and he heard nothing more of Pulling’s whispering.

The term that Pulling had set for Raymond’s convalescence coincided very closely to the period actually necessary for his recovery. It was nearly two weeks before he was firmly on his feet again.

“Say, Pulling, what was it that happened at the Fluke?” was one of Raymond’s first inquiries as soon as his curiosity endeavored to re-establish relations between the present and that Monday night’s experiences in the forest.

“They pitched you into the creek and you struck head first on a boulder,” replied Pulling, laconically.

He was “getting up copy” for the *Eye* and was writing as usual with great impetuosity and an extravagant expenditure of ink, at a bare pine table placed in front of the only window in Raymond’s narrow room.

"Where were you?"

"In the creek." Pulling made a stab at the ink bottle. He was intent at that moment upon "copy" and in no mood for conversation. Had it not been for Raymond's pale face in the chair opposite him his impatience would have exploded loudly. Raymond did not notice how busily occupied Pulling was. His own eyes were turned inward upon the scene at the Fluke well, and with an invalid's selfish indifference to the circumstances of others, he continued:

"Did that falling timber hit you?"

"No-p."

"I was sure it had fallen on you."

"It fell *over* me."

"How did you manage to get away before those two brutes could jump on you?"

"Slid down the bank."

"Then you saw what went on up above?"

"Yah."

But Pulling couldn't stand the interruption any longer; besides, the deeper Raymond probed into the events of that particular night the greater became the temptation for Pulling to discuss them. At last, dropping his pen, he turned around abruptly to Raymond:

"But, Lee, what happened to you? I saw you and that tall fellow in the slouch hat close in on one another, then you reeled as though you were drunk and suddenly collapsed. Must have given those chaps an awful scare—thought you were dead, I believe—pitched you like a log into the creek right where I was. But, gum! didn't the *Eye* give it to them, next issue. Wait 'till you see the story—three columns. 'Outrage upon an *Eye* reporter when seeking news in the Public's interest. 'Thugism in the woods.' That's the keynote of it. Made you a hero. You wouldn't know yourself. I had you tackle six 'Hessian hirelings,' that's the phrase I rubbed into them—goqd, eh? knock two of them down and were downed yourself only by a blow from behind. Lawler's immensely pleased. He's got his land, and the *Eye* had a complete 'beat' on the Fluke mystery. Great, wasn't it?"

"I don't know."

"Don't know? Say, Lee, you'll never make a newspaper man," said Pilling sadly. "You haven't got the journalistic faculty. But what I've been wanting to get at is what overcame you when you were tussling with that fellow."

"That face which I have told you of suddenly reappeared to me, but with astonishing vividness. In fact, it was so 'present' that I don't know whether the features I saw were those of the fellow who seized me by the throat, or of my visionary visitor."

"You don't say! That's interesting. I knew something must have happened to you. It was the face you've seen before, eh?"

"Yes, the same, but with some changes which I can't quite describe. Besides, this time the entire man was visible and not his countenance only. He stood in front of me so that I could see him from head to foot. Even the texture of his skin was apparent. Had he not a light suit on I would say positively it was the man who had hold of me."

"To be sure, the chap who had hold of you had a black rubber coat on. I remember distinctly."

Pulling's voice was rising with excitement.

"Moreover," continued Raymond, "we were both in a large, gas-lit room, the walls and furniture of which were plainly visible. You know on former occasions I saw nothing but the fellow's face."

"Yes, yes. Say, Lee, give me a description of everything in detail. Let me get it all down on paper with a diagram. I'm damned if this ain't interesting."

Pulling seized a pad of paper and jotted down with great eagerness Raymond's account of the visionary chamber and its contents.

"Go on, what else?" Pulling reiterated whenever Raymond paused in his story.

"You have every detail now that I can think of," said Raymond finally, and then Pulling sat back in his chair and read aloud what he had written, pausing here and there to add a word necessary for clearness or connection.

"It's photographic. Lee, you *must* have seen this room. You don't get things down quite so fine in dreams. Besides,

the furniture and get-up of the room is old-fashioned. It's all in the style of twenty years ago."

"Not only have I no memory of ever having been in such a room," said Raymond, "but save by breaking into some house, I don't know where I could look to to find such a room. Then, too, there's the man. I have never seen any one like him. The people I have ever known I can count on my fingers, and their faces are as familiar to me as yours."

"Well," said Pulling, "then it must be as I said the other day, your memory is yielding up some ghost of your childhood."

"Perhaps, but my memory is clear about everything as far back as, well, say my third year."

"You think so, but how do you know? Is there any one living well acquainted with your infancy?"

"Ye—s, one person, I think, a Scotch woman, my nurse."

"Good. I have it! Why not send her this description and ask her if she can recognize the room and the man."

Raymond hesitated. He trembled at the idea of making a test that might confirm suspicions that had troubled him sufficiently of late.

"What's the use, Pulling? If I were to trouble myself about every vivid dream I have I might as well turn psychologist at once."

"Pshaw. No one's asking you to turn anything. We're not talking about your dreams, but of this particular and, you will admit, peculiar visitation or vision, or whatever you choose to call it. What's the old woman's address. Let me send this description to her. Bet yer you wont call it a dream after you have heard from her. See if my theory isn't right. Now, don't be obstinate, like Lawler."

Raymond hesitated.

"What harm can the inquiry do?" persisted Pulling. "Perhaps, though," he added, "you have some reason for objecting."

"No, no," said Raymond, quickly, unwilling to acknowledge even to himself that his disinclination sprang from

anything more than the idea that Pulling's plan was an idle one.

"Well, then, sail in. I'll write for you if you'll dictate."

"All right," said Raymond, reluctantly. "It's a foolish business. However, the letter will have to go to Eastchester. Address it to Isaac Wart, to be forwarded. I don't know where Mrs. Stewart is living."

The letter that went out in the mail that evening read as follows :

"MY DEAR FRIEND—

"Your letter and its inclosure reached me a few weeks ago. It is still unanswered, partly because I have been ill. I am not quite myself yet, and this note is written by a friend who is so kind as to play amanuensis for me. Don't worry, however, about me. The worst is over, and in a few days I shall be quite myself again. I will then write you about my plans for the future, and in that way will answer your last. Don't think me unkind if for the present I say nothing about what I know is uppermost in your wishes. You almost tempt me to surrender, dear old friend, but not quite. What I want you to do for me now is this: Ask the Princess to be kind enough to find from Mr. Fergus the present address of my old nurse, Mrs. Stewart, and then send the letter which is inclosed to her, and her answer, when it is received, to me. As I cannot say all I want to say to you at present I will say nothing beyond promising you a long letter and much news in my next, which I will send you when I receive Mrs. Stewart's reply. I would like to tell you to remember me to the Princess, but I fear I had better not. However, give my love to Mrs. Finn and Mag, and, if you can, still think kindly of

Yours Unworthily,"

CHAPTER XXII.

MARIAN'S LETTER.

RAYMOND had completely recovered from his mishap and had surrendered himself again to the empty dawdling existence of Catch-On correspondent of the *Weekly Eye* before an answer to the foregoing letter reached him from the other side. The dread of painful discoveries, of reaching at last that final certitude concerning his father's crime which he had hitherto obstinately shunned and which had troubled him for a few days after the letter was mailed had passed quite into the background of his thoughts when an envelope with the Eastchester postmark revived it again in an instant.

The address was in a woman's handwriting, unknown to Raymond. He weighed the letter in his hand, questioning whether it was best to open it.

"Why not tear it up," he pondered, "and not jeopard by what is after all an idle curiosity the present tranquility?"

He thrust the envelope into his pocket and wandered along the road towards Welltown.

It was midday. The fierce summer sun was scorching the dusty road. The still air was heavy with furnace-like heat. The grass and tangled foliage by the wayside were gray with dust which rose in puffs under the footsteps and filled the mouth with a parched gritty taste. The monotonous chirruping song of the crickets and locusts, so dry that one could easily fancy it was the heat becoming audible, was the only sound that the sun had not silenced.

Raymond tramped along until the sunshine made his eyes blink, and the burr of the insects and the throbbing of the heat seemed to have got into his head. The green shade of the silent woods was too inviting to be resisted. He turned off from the highway through a wide opening amid the trees and threw himself down on the brown-matted floor under a big pine.

The solitude forced his attention again to the letter. As he inspected the envelope the strange handwriting not only

tempted curiosity but seemed to taunt him with cowardice. The solitude gave him a sense of secrecy, suggested that the letter once read could be destroyed without anybody being the wiser of....

"Of what?" cried Raymond aloud. "How I persist in frightening myself with shadows."

He tore open the envelope and turned at once to the signature. The letter was from Marian :

"DEAR MR. LEE—

"Mr. Wart gave me your letter the other day with the inclosure it contained, and now when it can be answered begs me to write to you, which I am very happy to do, particularly if the news I send shall prove to be of any real use or comfort to you. We are, of course, quite in the dark as to its purport. I obtained, as you desired, the address of Mrs. Stewart from Mr. Fergus and then went myself to see the old lady, who is living comfortably with relatives in a little white stone cottage on the outskirts of Hastings. She was so delighted—everybody is so delighted to hear of you. I gave her your letter. While reading it she exclaimed frequently, 'Well! Well!' and when it was ended she turned to me much agitated and asked: 'How did he learn all this, Miss Pilgrim?' I was not aware of even the contents of your letter, but had I been I could not, of course, have answered her. 'Why,' she said, 'this is his father's bedroom in the old home, and the gentleman he describes is Mr. Ayres. How did he come by the knowledge, Miss? He was but a wee baby at the time.' Then she read me your letter, and her answer to it is, in short, what I have just stated.

"I hope you will not be displeased, but I must confess to you that Mr. Wart has told me everything about that unhappy event which occurred in your early childhood; and now that I have told you this, may I add that I sympathize with you more deeply than I can say, for I know how greatly you have suffered for a human error which I am sure God's justice will rectify in ways that we cannot divine. Mrs. Stewart went over the sad story with me. There is no doubt that the room you described in your letter was your poor father's bedroom where you frequently slept when a boy, and the man, a Mr. Ayres, a friend of your father's, who was with him on that terrible night of tragedy. Mrs. Stewart said, furthermore, that in her judgment the evidence this Mr. Ayres gave reluctantly at the trial was fatal. Of course that is but an opinion.

"I hope this information is as full as you desired. If there is anything more you want to know, or if there is anything we can do for you do write to Mr. Wart. The poor old gentleman misses you greatly. I wish I could prevail upon you to return. Eastchester is a small place I know, but I am sure it holds your affections, and are we not happiest where they are? The old bells that you used to listen to and said were so solemn and melancholy because they gave voice to the silent yearnings and sadness of the people that lived beneath them are chiming forth as I write. I am sure they would not have quite so plaintive a note for your friends were you here.

"Your friend always,

"MARIAN PILGRIM."

CHAPTER XXIV.

DISCOVERY.

PITTSBURGH is not a city that promises the visitor as he approaches it great satisfactions—other than those rooted in the pecuniary instinct—and, afterwards, when he penetrates into it, it does not disclose itself with delightful surprises. It is throughout a very sordid looking town. Its grimy buildings and its sooty atmosphere seem to be, in the one case the physical expression, and in the other the lugubrious exhalation of hard purpose. As the stranger wanders through the narrow streets he runs so frequently into the whirr of machinery and revolving belting, and at the same time catches so many glimpses through foggy broken windows, of the sparkling blaze of forges, that the thought comes not unnaturally to him that the town moves by machinery, and its inhabitants even are attached somehow to fly wheels and running gear and are forged with fire into relationship with one another.

Early in the morning of the day following the event spoken of in the last chapter, Raymond passed out of the sooty sheds known locally as the Pennsylvania Depot (pronounced Dee-po) and set his steps in the direction he had been instructed to take to find Ralph's home. He had to

proceed against the morning tide of humanity making for office and factory, and on the way his reflections took a sombre cast from the foggy air in which the morning sun was visible only as a yellow haze, from the sad-looking smoke-stained buildings and the hurrying preoccupied crowds. He had determined to find Ralph's house afoot, because the hour was early and he feared a prompt arrival at the Winter mansion would be untimely. Mr. Winter lived not in Pittsburgh but across the river in Alleghany.

"When you get over the bridge any one will direct you," he was told.

Across the bridge, however, he went astray, either through misdirection or misunderstanding. For a time he wandered aimlessly along quiet, empty streets, lined with stiff, sober red brick houses, trim and polished and lined up as on parade, seeking a clue to his destination at the street corners. But the names on the street lamps and house walls were foreign to him and gave no indication of Farragut avenue. He met a cheery old gentleman leaving his doorstep and inquired the way of him.

"Do you know the north when you see it?" asked the old gentleman, loudly. He was hard of hearing, but turned his ear and inclined his head hospitably to Raymond's question. "Well, my friend, right about face. *That* is north. Now, then, two blocks to the right and you are on Farragut avenue; and No. 904 lies north. You will discover how many blocks. A good walk, but not too much for a strapping young man like you. Tell Mr. Winter that old Paul Sutter directed you. You see I know 904. Good-day. You are welcome."

Farragut avenue is the plutocratic thoroughfare in Alleghany. Except at one end, where it touches the river and is socially polluted, none but the very rich reside in it. To have one's home "on the avenue" is among Pittsburghers an indubitable certification that one has attained the condition of American beatitude—millionaireship. On Sundays, after divine worship, the multitude promenade there, rendering processional homage to Mammon. It must be pleasant to watch the crowd bask in one's financial effulgence, and by those who can afford the luxury the pleasure of

witnessing the moving spectacle from an invisible outlook behind drawing-room curtains is accounted one of the advantages of "living on the avenue."

The street was very quiet when Raymond entered it. An occasional tradesman's cart, a whistling messenger boy drumming a stick from post to post of the palings as he passed them by, and a gentleman strolling a block ahead in the direction he was going, were the only signs of animation Raymond's eye encountered. The houses along the way—detached, surrounded with trim lawns intersected by orderly gravel drives and walks, constructed the greater number of them of a pale white stone—wore with their refulgent, obtrusive thick plate-glass windows decked with precise lace draperies, a stark, outward, ostentatious expression. Clearly the builders of them had an eye on the street. They were architectural too, if elaborateness that amounts to a statement of cost impressed upon each façade be architecture. Despite the deadly facility of the Renaissance for such purposes or, perhaps more strictly speaking, because of it, the monotony of the architectural exuberance became tiresome long before Raymond had counted his way north to No. 904.

He proceeded along the avenue slowly. A few steps after he had noted the number 868 inlaid in a particularly rich stained-glass transom over a heavy oak door, he found himself passing by the gentleman who had been sauntering ahead of him. As Raymond approached him the young man's idle attention was attracted cursorily to his closely-fitting suit of fine gray cloth, his broad shoulders, erect carriage and military step. His head inclined slightly toward the ground indicated that he was busy with his thoughts. Raymond paused for a minute or two before passing him, deterred by disinclination to offer his own back to scrutiny similar to that which he had given the stranger's, but the thought of the silliness of acting from such a consideration quickened his pace. As he passed the stranger he threw a quick, careless glance at his face.

There could be no doubt of what he saw—*the face was the one he had seen at the Fluke well* and on two other occasions prior to that night's painful experience.

He halted suddenly, and to hide his excitement turned himself toward the nearest house as though to inspect it. The stranger, who apparently did not notice the abrupt manœuvre, continued his way. For a moment Raymond had to struggle for breath. Every drop of blood in his body pulsed violently. He stared blankly at the building in front of him and tried to collect his thoughts, but the result was only a blurred sensation of confusion. Moved by a blind desire to speak to the stranger Raymond hurried after him. Action helped Lee to think. What could he say to the man? he asked himself. The urgency of the question was painful, for he soon arrived within a few paces of the stranger, but could find no answer. Could Pulling's surmise be correct and the visionary face he had seen be that of the murderer? Then, was the man before him the Mr. Ayres whom his old nurse had declared was the person described in the letter he had dictated to Pulling? These questions flashed across Raymond.

The next instant, just as he was about to accost the stranger he was surprised to see him turn quickly from the street and ascend the steps of a large brick house, which he entered with a latch key. The door had scarcely closed behind him when Raymond, who followed after barely a moment's hesitation, rang the bell. The door was promptly reopened by a maid. Raymond was in a speechless condition. He stepped into the vestibule and stood there in awkward confusion. The girl surveyed him and then smiled familiarly.

"You're from the Oil Region?" she asked, in a soft Irish brogue.

"Yes," replied Raymond, in surprise. "I want to see...."

"Step in," said the girl, closing the door behind him. "Hasn't Mr. Vogel come with you? This way. You're to please take a seat in the library."

She ushered Raymond into a long, dark room, at the further end of which was a low, wide bay window that overlooked stables and the rear yards of houses on the street beyond. Raymond scarcely had time to seat himself in one of the heavy leather chairs and give a glance at the

massive mahogany bookcases, the regular lines of volumes in which had more of an ornamental than a working air, when he heard the footsteps of the master of the house descending the stairs.

Raymond had arrived at a vague decision to trust to accident and the inspiration of the moment to prompt him as to what to say in the coming interview. He arose to his feet.

"You are very late this morning, Vogel."

It was the voice of the man in the slouch hat whom Raymond had encountered at the Fluke well.

The speaker uttered these words at the threshold of the door. The next moment he was facing Raymond. Beyond any doubt it was the master of the well.

"Pardon me," he cried, embarrassed slightly, observing a stranger before him. "I have been expecting some one, and supposed you were he. The seryant didn't give me your name. Pray be seated. What can I do for you?"

The speaker's manner, after the momentary hesitation, was frank and easy, that of a man of the world quite sure of himself. Raymond detected a slight English accent to his speech.

"My call," began Raymond, slowly feeling his way forward and struggling with an unconquerable trembling, "is—is—very—unexpected."

"Yes," assented the master of the house, eyeing his young visitor from beneath a gathering frown. "May I ask your name?"

"Raymond Brewer."

The frown vanished, and was replaced by a look of startled expectancy.

"Brewer? Brewer?"

Despite the tone of inquiry, the repetition of the name conveyed to a sensitive ear the faintest indication of recognition.

"I do not know you, sir," he added sternly.

"I am aware of it," said Raymond. "I have come from England. Your name is Ayres, is it not?"

The man's face, naturally rubicund, became purple and ashen, and he leaned a clenched fist for support on the table by which he was standing. The affrighted look in his

eyes, far from intimidating, emboldened Raymond to proceed. He felt that he was pressing towards the truth, and that Pulling's conjectures were correct.

"I have come to see you," continued Raymond, "about the murder of Noble."

A cry, partly despair, partly rage, rang through the house.

"It's a lie."

In an instant the man recovered himself.

"How dare you enter my house to insult me," he roared, advancing toward Raymond, who stepped forward determinedly, flushed with the conviction that his father's vindication was at last possible.

"Leave the house instantly, or I'll have you arrested," cried the master.

There were sounds of hurrying feet in the hall.

"No," cried Raymond, exultantly. "Don't talk of arrest. You are the...."

"Father, what's the matter?" cried some one as the door was flung wide open.

"For God's sake, hush," the master suddenly implored of Raymond.

The supplication was unnecessary. Speech was impossible to Raymond. In the doorway, gazing in surprise at the two, stood Ralph.

"Father! Raymond!" he cried, advancing toward them. "Why, what is this? Raymond, Raymond, what has happened."

Ralph seized Raymond's hand. Raymond broke down. The awful situation he was in was clear to him.

"Nothing, Ralph, nothing," he murmured. "I came to see you and—and didn't announce myself, you see. Am sorry for the mistake, Ralph. I have been sick lately," he cried, piteously. "I want air. I must get outside."

Winter, Sr., stood rigid as a man petrified. Ralph put his arm tenderly around Raymond.

"Sit down, old fellow. You're ill."

"No, no," cried Raymond, pushing his way into the hall. "I must get out."

The next minute he was in the street. Ralph was beside

him, hurrying to keep up with his rapid pace. "Ray, what is the matter, old fellow?" cried Ralph. "Halt for a minute. You are terribly excited. Come home and rest. Where are you going to?"

"Anywhere. Oh! Oh!" Raymond bit his lips in pain. "I must get out of here. I must take the next train to Catch-On. Help me, Ralph," he implored.

"Help you, old fellow, of course. But . . ."

"Don't question me for a minute, Ralph." He turned suddenly to his friend. "Run back will you first and tell your father I am sorry for—my mistake. Tell him that you and I are friends. Return quick. I'll wait for you here."

"You are making too much of some little error, Ray. Come back with me. Father will understand."

"No, Ralph. Hurry. I am in pain and must get back to Catch-On."

Ralph couldn't comprehend his friend's strange mood, and as he could not persuade him from his course he returned docilely with the message for his father.

CHAPTER XXV.

But the best is when we pass from out them,
 Cross a step or two of dubious twilight
 Come out on the other side, the novel,
 Silent, silver lights and darks undreamt of,
 Where I hush and bless myself with silence.

THE long, sweet English twilight was yielding its last fragrances and shadows and quieting sounds. The yellow rays of the lights in the Priory windows were stealing further and further along the darkening lawn. It had, indeed, grown quite obscure under the old apple tree where the summer seats were. The voices of the speakers had dropped into hushed tones in harmony with the evening silence.

"Ralph wouldn't leave me until the steamer was almost in motion. He insisted on my returning to you all," said Raymond.

"Poor fellow," murmured Marian, pensively. "It seems so long ago the day that I met him first."

Then she asked :

"So he has no suspicion regarding what really happened between you and his father?"

"None."

A long pause followed. Then Raymond asked :

"Now, Marian, that you know all, tell me frankly, do you believe I did right? The responsibility at times seems more than I can deal with."

A hand was placed gently upon Raymond's as for comfort.

"Ray, dear, don't doubt. Friendship didn't lead you astray ; it only helped you to do the higher duty. What greater obligation can you owe to your father than to do Christ's uttermost command to forgive and judge not? Oh, Ray, isn't it lovely to have turned away from man justice, which is such an imperfect and selfish measuring out of pains and penalties to God's mercy, which I am sure is to understand and forgive."

"And you are satisfied with me, Marian?"

"Ray, I love you ; don't doubt any more."

THE END.