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THE ARCHITECTURAL RECORD



Vol. XLVII. No. 5

MAY, 1920

Serial No. 260

Editor: MICHAEL A. MIKKELSEN *Contributing Editor:* HERBERT CROLY
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Yearly Subscription—United States \$3.00—Foreign \$4.00—Single copies 35 cents. Entered May 22, 1902, as Second Class Matter, at New York, N. Y. Member Audit Bureau of Circulation.

PUBLISHED MONTHLY BY
THE ARCHITECTURAL RECORD COMPANY

1115-119 WEST FORTIETH STREET, NEW YORK

F. T. MILLER, Pres. W. D. HADSELL, Vice-Pres. J. W. FRANK, Sec'y-Treas. E. S. DODGE, Vice-Pres.



Photographs by John Wallace Gillies.

GARDENS OF CHARLES M. SCHWAB, ESQ., LORETTO, PA.
CHARLES WELLFORD LEAVITT, LANDSCAPE ENGINEER.

Evergreen Court, with Bronze Group of Orpheus by John Gregory, Sculptor.
Planting of Boxwoods, American Arbor Vitae and Native White Pine.

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The GARDENS OF CHARLES M. SCHWAB, ESQ. LORETTO, PA.

CHARLES WELLFORD LEAVITT, LANDSCAPE ENGINEER
BY ROBERT IMLAY

THE gardens of Mr. Charles M. Schwab at Loretto, Pennsylvania, are of unusual interest among monumental American gardens. In creating them, Mr. Leavitt has done something more than display high professional skill. Skill indeed he possesses; but it has a larger merit, for the gardens are finely expressive of the landscape of the locality and of a quaint settlement in the Alleghenies of western Pennsylvania.

One cannot praise enough this aim of capturing the spirit of a locality in garden art. It is the quality which too often is missing in great gardens in America.

This is unfortunate, because only through such intimate local expressiveness can arise an American style of garden design. Expressiveness and symbolism in a garden are not simply a matter of using local tree and plant forms; they should be carried imaginatively into all the elements of the whole design, in all its features of architecture and sculpture. It would seem as if designers have become so immersed in the task of trying to equal the extraordinary technical skill in design of the historic European gardens, concerning themselves with researches into motives of technique, that they have overlooked the quality of the

extraordinary local expression of these same gardens. Those of Italy are wonderful, not simply as masterworks of the technique of garden design; much of the real art of each of them, as in the case of d' Este at Tivoli, Lante at Bagnaia, the Boboli at Florence, the Farnese at Caprarola, lies in their remarkable neighborhood expression, whether it be the spacious, worldly majesty of a suburban villa of Rome in the Campagna, luxurious, sensuous, southern; or the simpler, more countrylike situation on a northern hillslope, sequestered and homelike, in exquisitely delicate scale; or the palatial urban surroundings of the City of Florence; or else the bold, bleak setting on the mountainside, perched high above the valleys that extend away to the southward, amid the oaks and pines tossed by the great winds, rustic, rugged, even a little stern. Although these gardens are characteristically Italian, the local expression of each would be totally out of harmony in the setting of the others. In fact, they are all the more Italian, because they are so intimately rooted in their own locality. This same local fitness is evident in the gardens of France and England, though perhaps to a lesser extent, since these countries do not have the wide range of landscape found in Italy.

America, in a like way, must attain the same local expressiveness, in our great variety of landscapes. Our gardens should symbolize local conditions of land and light and atmosphere and color, trees and shrubs and flowers and rocks, and they should also contrive to gain some of the human flavor and whatever background the district may have come to possess in the passage of years. Until such local personality is expressed, our gardens will be more or less arbitrary arrangements of geometrical forms. Their geometry will be unimaginative; and, in art, there is nothing more uninspiring than geometry that is without meaning. Particularly is this true of planting. Such intimate elements of nature can hardly take on the form of human art unless it be peculiarly appropriate and harmonious. Perhaps this perfunctory use of the mathematics of form in gar-

dens explains why some landscape designers have gone to the other extreme, which is that of seeking a freer, more naturalistic arrangement. They have sought a sincerer treatment through ignoring or slighting the geometry, avoiding formality by skimping the architecture and sculpture and arranging the planting in a naturalistic manner. But designs of this type are just as superficial in their way as the other type. They are weak in form and they lack character and contrast.

Thus the great need of garden design today—like architecture, be it said—is traditions of local expression; traditions which will develop personality and craftsmanship in our garden art. And, since big things grow from little beginnings—a truth that is particularly evident in the matter of background and traditions—such a local, vernacular expression will arise in any district through long experience in the simple gardens of small houses, in the planting of farms and along roads and in pastures. Much of this experience will be unconscious, and the keen designer of a great garden, searching for local flavor, may somewhat anticipate the evolution of a local garden tradition by observing, in the neighborhood where his garden is to be located, such characteristic use of stone and plant and flower in sunlight as will aid him in gaining the local landscape expression in his design. Then he will further try to incorporate in it the human atmosphere local in the place.

Such appears to have been the purpose of Mr. Leavitt in this great garden. In a large measure he has attained it. To understand his success, an idea should be had of the landscape and human character of the district.

Loretto lies about one hundred miles east of Pittsburgh, in the Alleghenies. It is in a district of broad rolling hills and wide valleys, of no great differences in heights, though all of it is high in elevation above the sea. Thus, notwithstanding its rather gentle hill slopes, its great elevation gives it the climate of mountains. It has turns of mist, swift changes from bright sun to clouds, with gusts and squalls playing over the woods

and farmlands and pastures—a characteristic landscape of eastern America. With such a rugged climate go the trees and plants of the district—white pines and sugar maples, native thorns with their gnarled branches. On the hillsides

years of the eighteenth century, when, in 1799, Vallié Gallitzin, a Jesuit missionary, dedicated the first church of St. Michael's there. Fr. Gallitzin was a Russian nobleman who came to this country, entering the ranks of the So-

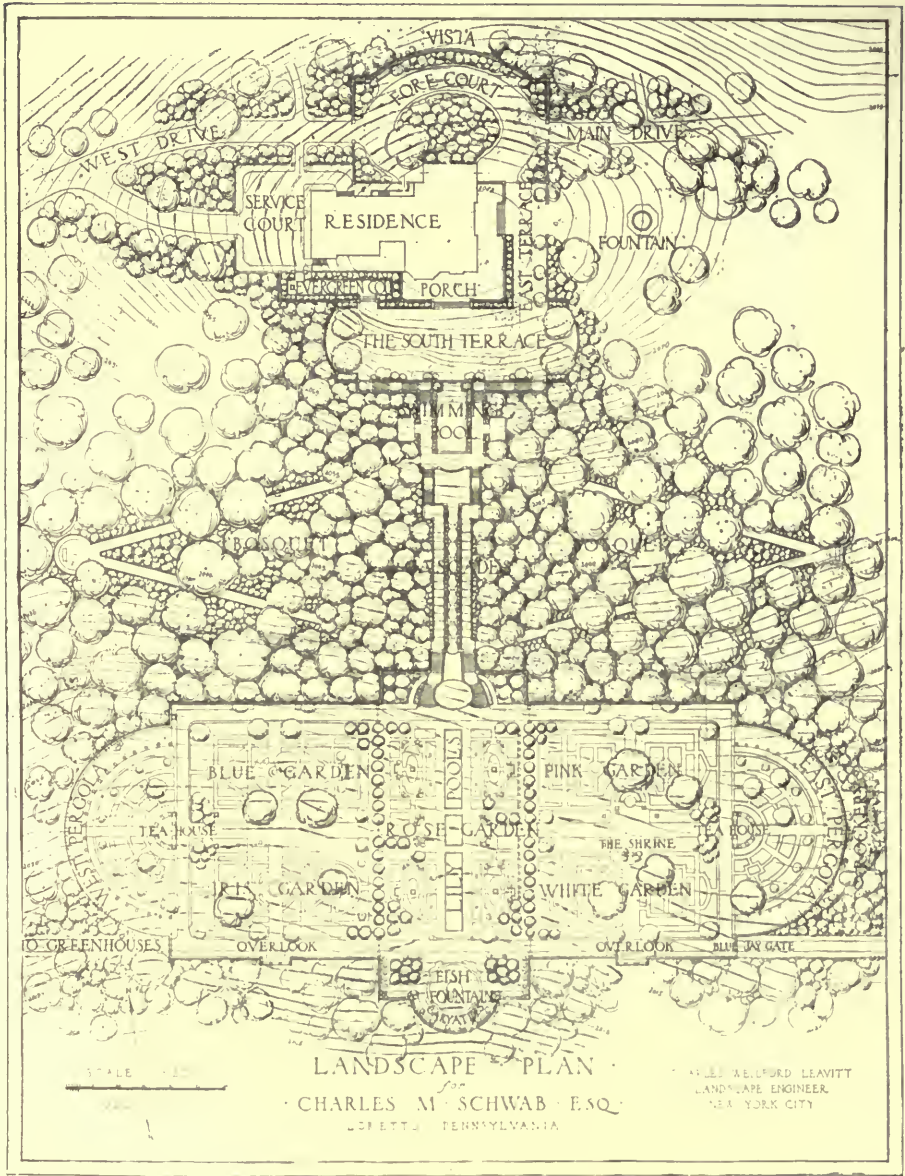


VIEW FROM MAIN ENTRANCE GATE ACROSS THE PIAZZA AT THE INTERSECTION OF THE STATE HIGHROAD WITH THE VILLAGE STREET.

and in the pastures are wild crab-apples, fragrant, and, when in blossoms, intense with hues of pink and white against the evergreens. Mr. Leavitt has made good use of these native trees, and besides has brought in cedars from Massachusetts, near Cape Cod.

The human characteristics of this locality are unusual, of much romantic charm. Loretto was founded in the last

ciety of Jesus, and, at the order of Bishop Carroll of Baltimore, went into western Pennsylvania. Loretto is, therefore, on the edge of that pioneer America, stretching westward from the Appalachians, which was reclaimed during the nineteenth century. Even before that, however, in colonial times, it was not far east of the route of the French voyageurs of Canada as they traveled



PLAN OF HOUSE AND GARDENS OF THE ESTATE OF CHARLES M. SCHWAB, ESQ., LORETTO, PA. CHARLES WELFORD LEAVITT, LANDSCAPE ENGINEER.



LANDSCAPE PLAN OF THE ESTATE OF CHARLES M. SCHWAB, ESQ., LORETTO, PA. CHARLES WELLFORD LEAVITT, LANDSCAPE ENGINEER.

from Quebec to St. Louis and Louisiana by way of Lake Erie, Forts Presque Isle and Duquesne—now the cities of Erie and Pittsburgh—and on down the Ohio river. In the sixteenth, seventeenth and eighteenth centuries it was a country disputed between the Indian tribes and the French and English trappers and hunters and soldiers; a region of resolute, hardy spirits, whose lawless ways were mitigated only by the unflinching courage of the missionaries. Such was the romantic birth of Loretto, which remains, to-day, a tiny, undisturbed, unambitious American village, of Catholic atmosphere and un-English ancestry. It is thus unique, though had it not been the birth place of Mr. Schwab, it would no doubt have continued to slumber unvexed by any undue attention from the outside world.

This distinctiveness of the humanity of the countryside Mr. Leavitt has well expressed in the architecture of the estate. It is seen in the village cross road, with its tall cross, out of which the road to Mr. Schwab's house leads; in the buildings and walls and entrance gates of the estate, particularly in the charming farm group which Messrs. Murphy and Dana cooperated with Mr. Leavitt in creating. It also shows in touches in the garden, in the lower level, and one seems to feel it in the planting. Since the gardens are our main interest, the rest of the estate, including the house, may be only mentioned. It consists of seven hundred acres, mostly old farmland, woods and pasture, and contains, besides the house with its terraces, service appurtenances and roadways, an immense vegetable and fruit garden, two farm groups, greenhouses, a small open air theatre, a little rustic cottage used as a retreat solely by the owner, a golf links, and the great garden itself. The design of such a work was a varied enterprise, and in accomplishing it Mr. Leavitt called in many artists to cooperate with him, particularly Messrs. Murphy and Dana, the architects.

The house lies on the crest of a low hill, about sixty feet above the cross roads of Loretto. Its wide, simple greensward expanse, with balustraded

terrace, looks toward the south, affording a superb view over the country. A smaller, more secluded terrace, lies along the service wing of the house a few steps lower, and with slightly more planting and garden furniture. To the east is an open lawn on the top of the hill, with a flagpole on the axis of the great terrace. Down from the terrace, alongside its retaining wall, lead steps to the water feature which carries down the slope to the great garden. To build the garden a cut was made into the hill, a retaining wall constructed against it, and a fill brought into the valley, where another retaining wall lifts the garden above the main highway that runs from Pittsburgh to Philadelphia. The course of the highway was changed at this point. Thus the garden lies protected on the south slope of a hill, yet overlooking another valley. The space between the garden and the house is wooded with white pines, forming a bosquet through which is cut the main axis of the water feature and cascade. All this arrangement is evident in the plans.

One may gain an idea of the size of the whole from the following dimensions: The distance from the great terrace to the garden is 247 feet, the drop in level being fifty feet in this distance. The main garden is 190 feet wide and 600 feet long. The width of the lily pools which centre across the garden is twelve feet. The highway is ten feet or more below the garden. The design, therefore, derives much character from these decisive changes in level.

Here, then, are the main features of the design—the southern hillslope and the three grand divisions of the garden lying parallel across it. They include the great terrace of the house, the bosquet and the formal garden, all tied together chiefly by the water treatment of fountains, cascade, garden pools and fish fountain at the end, with steps and ramps forming a vista from the house over the landscape. The effect from the house is therefore not so much that of a garden cut out of the landscape, a thing apart from it, but, instead, that of a beautiful view of sky, hills, woods and open spaces, in the centre of which is the



CASCADE, WITH DOUBLE STAIRCASE DESCENDING
FROM THE RESIDENCE THROUGH THE BOSQUET
OF WHITE PINE TO THE ROSE GARDEN.

garden, the heart of the whole landscape scene. The thick planting of the bosquet at the sides of the water treatment furnishes a frequent enframement of this splendid vista.

This able scheme of design has been

tremely architectural and monumental; while the rest of the garden is more naturalistic, contains less architecture, and that architecture—for the most part of walls and colonnades of the great rounded ends—is less sophisticated and more



THE EAST "GRIFFIN," IN LIMESTONE, AT THE LOWER BASIN OF THE CASCADE, PAUL MANSHP, SCULPTOR.

worked out in a highly interesting fashion. The basis of it all is the geometry, the mechanism of the design, seen both in the pattern of the plan and its relief in walls, stairs, water and other architectural elements.

One may say of the mathematics of the plan that they are well thought out, well proportioned, and, on the whole, well balanced. The water feature is ex-

rustic in character. It might be thought that this contrast has been carried almost too far; that more harmony and co-ordination in design between water feature and main garden would have resulted if more water elements had been introduced into the main garden.

In respect to the minor details, the fuller shapes and great round ends of the flower garden seem slightly at vari-



VIEW ALONG THE MAIN AXIS, LOOKING FROM THE SWIMMING
POOL LEVEL DOWN THE CASCADE.



THE ROSE GARDEN WITH ITS THREE LILY POOLS AND LONG GRASS
WALKS, AND PLANTING OF RED CEDAR.



TWO OF THE LIMESTONE "CARYATIDES," HENRI
CRENIER, SCULPTOR, ON THE BALUSTRADE
OF THE ROSE GARDEN ABOVE THE VALLEY.



FISH FOUNTAIN IN ROSE GARDEN, WITH
LIMESTONE "CARYATIDES" AND BRONZE
FOUNTAIN. HENRI CRENIER, SCULPTOR.



DETAIL OF THE CASCADE WITH RAMPS
OF GRASS AND STONE AND PLANTING OF
LAUREL BORDER AND SPREADING EVER-
GREEN (*JUNIPERIS TAMARICIFOLIA*).

ance with the sharper, more angular shapes of the cascade. This slight in-harmony extends to the design of the bosquet, although the owner did not care to develop the bosquet. On the design as presented, nevertheless, it is well to remember that the bosquet hardly serves as an interesting contrast to the open garden and a relief from its openness and sun and winds, nor does it serve as a transition from the highly abstract geometry of the garden to the naturalistic design of the rest of the estate. Except for two ramps, it is undeveloped. Thus, in its general features, there is a slight inconsistency and disharmony in the design.

The details of the scheme are of the highest excellence. Again the water treatment figures prominently in this part of the achievement. The photographs show the splendid execution, the interest and charm, the monumental character, at the same time expressing the locality. The color aids in the effect. There is a small amount of smooth faced ashlar of limestone, but most of the stone is local, a warm, rich, light tawny yellow of unusual beauty. It has been excellently handled, as the details show. In the balustrades and in the cascade and fountains of the water treatment the limestone appears. Here again in the water feature is a slight disharmony of lines and slopes in plan and in relief. The angularity and segments of the steps and walls and balustrades is not altogether suited to the sinuous, subtle curving of the cascade. Lower down the uncompromising rectangles of the lily pool, with their flat, unmoulded curbs, harmonize neither with the sinuosity of the cascade above nor with the fish fountain at the other end. This rectangularity, if I may use the word, deserves comment, because it is one of the most persistent minor faults in present day design, of all types, where the most complex, delicate, graceful forms are often brutally marred by having rectangles thrust among them. It may be noticed in the exterior of the office of J. P. Morgan & Co. on Wall street, New York—a fine building, indeed, almost Greek in refinement and elegance of form; but its walls are cut with

huge rectangular windows, great holes without any relieving forms of architecture or chamfer or panelled splay to harmonize them with the wide flowing curve of the base below or with the luxurious, Corinthian-like cornice above. This particular fault is also common in interiors. It should be made clear, however, that the faults in the Loretto garden are those of detail, and that they do not greatly mar the excellence of the whole. All that may be said is that the design has not quite that extraordinary consistency and closely woven harmony of the old Italian models, nor of the designs of Mr. Platt or of Mr. Stanford White in this country.

One excellence the architecture of Mr. Leavitt's design embodies to a high degree. It has the true garden scale. This is a virtue not so well understood in garden art in this country. One may not easily define it. However, garden scale is quite different from the scale of buildings, particularly of buildings in the city. It is peculiarly expressive of the country, of the garden, and this is perhaps its secret. Robustness and heaviness are not necessarily its characteristics, though often these are noted in it. It is bound up with natural aspects of color and of sunlight, of great play and contrast and vivacity of light and shade, of sculptur-esque and dramatic qualities. It is in harmony with outdoors, of the earth and growing things, often rocky instead of stony. Besides this intimate harmony with nature in the architecture of the garden, it has a human element no less distinctive. It symbolizes the country—the rural, the rustic, the romantic, even with touches of the fantastic, and the grotesque, the jovial, the burlesque and a hearty country humor.

It is the character of Twelfth Night rather than of the Merchant of Venice.

All these qualities belong in the expression of the architecture and sculpture of the garden, in varying degrees in the different parts of the garden. Often the terraces near the house may partake of it to the extent of forming a transition between the garden and the more sophisticated, quieter architecture of the buildings. In the more open and

frequented parts of the garden, the scale and the architecture is primmer, but distinctively expressive of the country, and only in the bosquet and in the outlying features may it yield to pure fancy. All the old European garden architectures have this sensitive expression to the highest degree; but in America it is neglected, even in our best gardens, where the scale is apt to be more like that of buildings, or is too delicate, or else too citified to be in keeping with the country.

Of course, such unusual expression in architectural design is almost too difficult for the modern architect. He is too occupied with buildings, too carefully trained in academic form and rigid, puristic taste for such phantasy of design. For him, form is bound up too much with the functional expression of construction, to feel it almost as pure modelling in light and shade. In truth, the architectural elements in a garden are hardly architecture at all, as we know it in its modern specialized form. It is only slightly constructional. It is rather sculpture. Of course, the architect may best conceive the scheme of design and its main garden features; but he can hardly work out so well as could the sculptor the details, not of statuary only, but of pedestals, fountains, water motives, even stairs and balustrades and walls and stonework—that is, and here is the drawback, if the modern sculptor were enterprising and had fitted himself to cover the whole range of sculptural design, and had not gone to the extreme of specialization by absorbing himself in the study of the human figure. The human figure is the apex of the sculptor's art; but he might not be harmed if he cultivated a broader interest and did not feel obliged to call upon the architect to design the pedestals or settings or even the lettering—purely a sculptor's task—of his figures, as is now the practice. There is talk of the painter's too great concentration upon "easel painting"; so one may think that the sculptor is too devoted to the gallery piece.

However this may be, Mr. Leavitt, all things considered, has successfully bridged the gap left by the sculptors. For the purely figure side of the sculpture

at Loretto he was fortunate enough to have Mr. Schwab call in a group of well-known American sculptors. Mr. Paul Manship supplied some characteristic statues, particularly the bronze of the east fountain and the stone griffins at the foot of the cascade. Mr. John Gregory did the exquisite bronze of Orpheus at the Evergreen Court. Here also are works by Miss Ann Hyatt, Mr. C. A. Heber, and animal reliefs by Mr. Fred S. R. Roth. But perhaps the figures that have best caught the spirit and scale of a garden of the country are the remarkable caryatides of the fish fountain. These are bold vertical elements of design placed at the end of the vista from the house down the main axis of the water treatment. Among these the male figure deserves special notice for its rustic character, vigorous modelling, splendid light and shade, which the artist has obtained without losing refinement. They are the creation of Mr. Henri Crenier, a young Franco-American.

There is not, however, one jovial imp or satyr in the whole collection. Nor do we note our American counterpart of these antique terrors of the landscape, the Indians. Indians would well express the legendary history of Loretto, of its old pioneer-voyageur country. I mean real, deliciously ugly, wicked-looking redskins—such as used to fascinate us in "Buffalo Bill." Indians might give us Americans a moral equivalent for satyrs in our gardens. Besides, the Indian has one advantage over the satyr in claiming admission to our gardens. The school legends, no matter how harshly they treated his character, never attacked his morals. So far as we know to the contrary, in that respect he was always a knightly gentleman, and hence he could easily pass the American censor. So may our sculptors create some warlike Indians for us! We need a garden mythology badly. Unfortunately, all the sculptured Indians are handsome, gentlemanly appearing young men, who could not bear to tomahawk a chicken. They are too respectable even to be schoolbook heroes. One fears that many of our sculptors are a little too *précieux*



DETAIL OF THE ROSE GARDEN,
WITH ONE OF THE FOUR ETAIN
OIL JARS, PAUL MANSHP, SCULPTOR.



PLANTING IN THE ROSE GARDEN OF
RED CEDARS AND OLD BOXWOODS.



THE NORTH LILY POOL IN CENTRE OF GARDEN
ON MAIN AXIS. PLANTING OF SUGAR MAPLE,
AND, IN FRONT, BORDERS OF HELIOTROPE
SURROUNDING ORANGE TREES IN STONE VASES.

for the hearty atmosphere of the country.

No description of the art of Loretto could end without calling attention to the planting. Indeed, it merits more notice than anything else. Unfortunately

the maples and native thorns have been used, re-inforced by the stately cedars brought from Massachusetts pastures. These trees mainly, and shrubs have been grouped with great skill and with a fine taste too seldom found. Everyone



BLUE JAY GATE, OR THE VEHICLE ENTRANCE TO THE WHITE GARDEN. MASONRY OF NATIVE PATTON SANDSTONE IN WARM LIGHT-BROWN TINTS.

one finds it nearly impossible to convey clear ideas of planting in photographs or text. The picture of the landscape, the light, and the variety of growing things must be seen to be felt in reality. In the dilemma few observations must suffice.

I have referred to the characteristic trees of the region and how Mr. Leavitt has used them in the design; how the white pines especially and the hemlocks,

knows of the stilted planting of evergreens; of the use of spotty, fussy, flower beds and paths. These may be harmonized in European gardens by the soft mellow light, often misty, of England or France; but in our light, such self-conscious design shows up clearly, every detail baldly revealed. We have not dramatic statuesque tree forms like the Italian stone pines and cedars, and we

cannot succeed with exaggerated efforts to rival these. At the other extreme is the type of planting which is more naturalistic, scarcely designed at all, and utterly out of keeping with the strict geometrical shapes of the garden. Thus

of the Loretto garden points the way, as a careful study will show. The photograph of the lily pools illustrates the wonderful design and modelling of the planting. Here you notice the tall cedars of the background, the vertical elements



THE EAST TERRACE OPENING ONTO THE FORECOURT AND THE MALL, WITH BACKGROUND OF GIANT WHITE PINE.

in American garden design there seems to be two conflicting practices in planting. One slights design; the other exaggerates it. Neither understands the possibilities or limitations of our hard sunlight, or the way to use native plant forms as elements of design, at once reinforcing and softening the geometry of the garden. Clearly much experience is to be gained here, and the planting

carefully composed, but not too obviously so; the rounder, fuller shapes of the box filling the angle between the cedars and the low shrubs—again not too obviously, nor too solidly, affording big depths of shadow; and the lower, flatter shrubs and patches of flower beds and greensward. The whole is an extraordinary arrangement of design in contrasting shapes and planes, in striking



SHRINE IN THE WHITE FLOWER GARDEN,
WITH MARBLE STATUE, "THE SPIRIT OF
THE GARDEN." HENRI CRENIER, SCULPTOR.
PLANTING OF SUGAR MAPLE AND BOXWOODS.

but subtle artistry. It is not often that one sees such personality and such character in planting. It shows a true appreciation of how to use growing forms in the arrangement of art. Effective also is the use of this planting in connection with the architecture, much as furniture is arranged in a room. Examples of this are the shrubs of laurel that fill the space between the ramps and the troughs of the cascade, the vines at the base of the caryatides, the trail-

ing juniper planting at the fish fountain, and lastly the exquisite simple planting of the east terrace near the house.

Such design points the way towards obtaining character in planting; not only character of technical skill, but the local flavor of the neighborhood. It is the expression of locality in a formal garden that alone may make its rigid geometry seem entirely appropriate, or even endurable in our bold, rough landscapes and clear, vivid sunlight.



SMALL CIRCULAR PERGOLA AT THE INTERSECTION OF THE FRUIT GARDEN AND THE CUT-FLOWER GARDEN, WITH BRONZE FIGURE OF "ABUNDANCE." C. A. HEBER, SCULPTOR.

RENAISSANCE ARCHITECTURE AND ITS CRITICS



By A.D.F. HAMLIN



PART IV - *Construction & Expression*

YOU were aware, Sire, that we do not care for the things about which we are ignorant, and that one must know what architecture signifies, to esteem it as it deserves." In these words, addressed by the great Blondel to Louis XIV, we may find one explanation of the attitude of the hostile critics with some of whose charges against Renaissance architecture I have tried to deal in previous papers of this series.* They are hostile to the Renaissance, because they do not understand it. With all their scholarship, which is often thorough and sometimes profound, they have failed to grasp its real character or penetrate to its true inner content and significance.

This failure is due to one or more of several causes. The first is a strong prepossession in favor of Greek or Gothic architecture resulting from long previous preoccupation with the study of these styles, combined with an inability to approve a style differing so widely as does that of the Renaissance from those which have previously absorbed their interest. The second cause is the fact that, with hardly an exception, these critics are untrained in the profession and practice of architecture. Thus one critic commends Michelozzi's shallow window reveals in the Riccardi palace, "since the farther out the glass is placed the less will be the shadow thrown upon it, while the interior reveal . . . reflects light into the interior." That is, the amount of light depends upon the position of the glass! These critics are literary critics, scholars, specialists in other forms of art, who approach their sub-

ject from the outside, with little or no experience of the psychology, of the processes, the conditions and methods of architectural design, and without technical training in practical construction. Having first assumed as axiomatic certain philosophical maxims and criteria of their own, and illustrated these by carefully selected examples from Greek or Gothic art, they apply these maxims and criteria in their own way to carefully selected examples of Renaissance architecture for its condemnation. In this criticism those facts, features and aspects which might count against this condemnation are generally overlooked or minimized. Underlying this procedure there seems to be a fundamental misunderstanding of the true purpose and function of architecture itself. It is treated as a symbol, as a philosophy, as an expression of sentiments, religious ideas, morals, social character and movements, as almost anything except what it really is—an art based on practical needs, serving utilitarian purposes by the use of available materials, under the limitations of climate, environment and tradition, by the application of human science and common sense inspired by the love of beauty. Race, religion, social and political changes, the great movements of human thought, all have their influence on architecture, but they are not architecture, and architecture "expresses" them only in so far and in such manner as these forces act upon the architects who try to solve these very practical problems, and on their clients or employers who provide the problems and the means for their solution. The expression of moral, religious and social ideals in architecture is real, but inci-

*The Architectural Record for August and September, 1917, and July, 1919.

dental. It is a confusion of ideas to unload upon architecture—that is, upon the architects—the praise or the blame of the forces under which they work, except in so far as they—the architects—have rightly or wrongly used or resisted these forces. And that is to be determined not by *a priori* reasoning, but by the testimony of the works themselves.

A third reason for the inadequate comprehension of the architecture of the Renaissance by these critics may be found in their too exclusive preoccupation with façades and details, which is in turn due to their general approach to the subject from the outside. The details are treated as if they were the architecture, instead of the form-alphabet by whose means the architectural conception is expressed. They are an essential part of the architecture; they constitute one of its criteria, but only one, and the

architecture of the Renaissance is something behind and under its details and much bigger than they. The form and mass of the building, the scheme of its plan, the interior effect, the structural design, even in many cases the façade composition as distinguished from its details, are slighted in these criticisms in order to concentrate attention on the orders and decorative details.

One of the most impressive interiors of modern times is that of Alberti's church of San Andrea at Mantua. It illustrates perfectly what Alberti meant by "restoring the good ancient manner." for its grandeur of scale, its simplicity of scheme and its system of internal buttressing are all thoroughly Roman; yet it is a wholly original conception, copying as a whole no assignable Roman example. Yet the hostile critics, even when they grant a few words of praise



THE CERTOSA AT PAVIA: WEST FRONT—EXTERNAL DETAILS EMPLOYED AS SURFACE ORNAMENT.



PALAZZO DEL CONSIGLIO, VERONA. DESIGN APPROACHED FROM THE SIDE OF DECORATIVE EFFECT.

to this superb interior, generally devote most of their criticism to the west front, in an effort to prove it a copy of a Roman arch of triumph. The marvelous variety of plan and almost invariable success of effect, of the North Italian types of domical church, are hardly even alluded to by these critics; or if the allusion is made it is usually coupled with fault-finding with details of the orders, external or internal.

Fergusson, as we have seen, denies to the Italian Renaissance architecture the quality of truthfulness. This is, next to the charge of copyism, the accusation most frequently laid against the Renaissance; it has been in different forms reiterated by Ruskin, by Moore, by Porter, by Statham and by others. The accusation is based upon the fact that, as a general rule, Renaissance buildings do not, externally at least, "express construction"; that their external details

were not designed to perform any essential function in the structural scheme of the building; and that many of them, designed originally for one or another structural function, are employed solely as surface ornaments, suggesting a structural framework which does not exist. The words "sham" and "make-believe" are applied to this practice, and the classic orders, above all the combination of the arch with an order, come in for especial censure.

Fergusson, moreover, contends that such buildings as St. Peter's at Rome and St. Paul's at London are examples of untruthfulness, because, though dressed in Roman details, they are not Roman (that is, antique Roman) buildings. Just what he means by this charge—just wherein the untruthfulness lies—is not quite clear. Probably Fergusson's idea would have been better expressed by reversing the order and charging that

these two great buildings and others like them, not being ancient Roman buildings (which of course they could not possibly be), should not have been designed with ancient Roman details. If this was his meaning, it was merely another form of his charge of "reviving a dead style" or "designing in a dead language." I briefly answered this charge in my last paper (July, 1919); I will only add to that answer that I can think of no reasons in the domain of artistic "morals" or of common sense to forbid one's using Roman architectural forms whenever they serve better than any other forms to express and carry out the architectural conception. Considering the fact that in Italy there never was a time when they were not in use, from the days of the Roman Empire down to the present day, we may rightly call them the traditional architectural vernacular of the Italians. Fergusson admits this on an early page of his "History of Modern Architecture," but seems to forget how absurd it renders his charge that the use by the Italians of their traditional architectural vernacular was "designing in a dead language." It would be about as reasonable to say that we write in a dead language when we use the Roman alphabet.

II.

What do the critics mean by "the truthful expression of construction"? The words in themselves are clear enough, but what is their application by the critics? Apparently they mean (a) that the structural system of a building should be expressed in and by its external design; and (b) that no decorative forms should be employed that do not reveal, suggest or express this structural framework or in themselves perform a definite structural function. Any architectural design, therefore, that fails in either respect is not a truthful design and should be condemned.

The contention I have above tried to analyze has, by virtue of its constant and insistent reiteration, obtained such wide and unquestioning acceptance that to attack its validity must seem to many a

reader a surprising piece of philistinism, almost of artistic immorality! Moral catchwords have great power with the multitude, and when a critic can use the words "untruthful" and "false" of a design, the average reader accepts its condemnation without question. But it behooves the thoughtful student to examine carefully into the basis, the origin and the applications of the criterion of "truthfulness in the expression of construction" before he yields absolute assent to the condemnation pronounced by the critic. For to accept its absolute and universal validity is to assent to the whole mass of sweeping condemnation visited by the hostile critics upon nearly all the architecture of the Renaissance as well as upon nearly all ancient Roman architecture. They are quite correct in claiming that in these two architectures the external dress rarely expresses the construction in any such way as that in which the forms of Gothic architecture express its structural system; while the decorative details of these styles seldom perform any real structural function in the edifices they adorn.

But the reader who reflects on the implications of this contention, who considers the significance of so sweeping a condemnation of human activity in creative art, who meditates upon this imputation of fundamental error, of untruthfulness and love of sham and pretence to one of the most active-minded and progressive of peoples through two periods of centuries of extraordinary productiveness in architecture, who moreover recalls his own impressions of wonder and delight in the contemplation of many of the works thus visited with artistic censure—such a reader may wisely question whether the premise from which it flows is correct.

This premise is closely connected with the assumption that Gothic architecture, especially that of the thirteenth century in Northern France, should be the norm and criterion by which to judge all architecture; and since in that architecture the structural system is clearly expressed by the exterior form and decorative details, all architectures which

conform to this principle are good architectures. The Romans violated it often; the Renaissance builders very often; therefore these are bad architectures.

Whether the contention in this premise results from the assumption that the French Gothic is the norm for all styles, or this exaltation of the French Gothic is the result of the assumption of the premise as an axiom, makes little difference. Both contentions are pure assumptions and must be tested by the facts. Both are open to question and must be defended by reasoning based on adequate observation and discussion of all relevant considerations.

Both assumptions are defective because based on too narrow a field of observation. So far as they rest on facts they appear to be derived from the study of one class of buildings—those for religious worship—comprising two main groups: the antique temple, especially the Egyptian and the Greek, and the medieval cathedral. All the buildings in these groups were erected for a like general purpose; each is an isolated monument, standing in the open, built of stone, which was the only material generally available, and under certain definite conditions of society, government, religion, race, situation, climate and resources. It was inevitable that the Egyptian, the Greek and the medieval builder should have built as each did; and the frank expression of the structural system was almost equally inevitable, given the material employed, the purpose of the building and the conditions under which the style was developed.

But it is a universal and inescapable law of artistic and peculiarly of architectural progress, a law rooted in human nature, that after the evolution of structural forms to meet practical necessities, and the development of their decorative treatment, have culminated, the force of tradition continues the use of these forms as decoration, even when and where they are no longer needed structurally. To claim that this is false art is to set up a purely transcendental kind

of criticism which ignores the inescapable laws of human psychology in design. In every age, in all the arts, in all styles, one may trace the operation of this law. The sloping walls of the Egyptian temple do not express construction, but are obvious traditional reminiscences of primitive mud building. The quite useless cavetto cornice preserves the memory of the papyrus stalks which formed part of the primitive structural framework of papyrus and mud; it serves a purely decorative purpose. The flaring capitals of the Egyptian campaniform columns perform no structural function whatever; they are purely decorative survivals of forms which once had a definite use and function. The triglyphs, mutules and guttae of the Greek Doric temple and the useless volutes and dentils of the Ionic order are further examples of the use as ornament of details whose structural origin has been forgotten. So also the deep coffering of the Greek pteroma ceilings, a treatment quite foreign to stone construction but preserving the tradition of panels framed in wood, is as deserving of the opprobrious term of "sham" as many of the Renaissance decorative details to which it has been applied by some critics.

The whole history of Gothic architecture is likewise a record of continual successive transformations of structural forms and members into mere ornaments. Gables, pinnacles and tracery are thus converted from purely structural to purely decorative uses—not in the decline of the style but in the very hey-day of its culmination in the middle period; from the very first the vaulting-shaft was made an essential part of the decorative system of the interior, although, as I have shown in a previous paper* it was always a superfluous member, seeming to carry the vaulting which is really supported by the masonry behind it. It is exactly as "false," as truly a "sham," as the engaged columns of Roman and Renaissance architecture,

*See the Architectural Record for January, 1917, page 11.

against which the transcendental critics lay so heavy a charge of insincerity and deception.

The decorative use of structural members is thus seen to have always been a matter of taste. The assumption that it is *per se* to be condemned is not sup-

voke against it an alleged law founded, after all, on a pure assumption.

Whatever may be the merit of the contention we are discussing as an abstract proposition, it would be found inapplicable to many classes of buildings, for many systems of construction and many



BAPTISTERY OF FLORENCE. DOME CONCEALED BY WALL OF DRUM CARRIED UP TO SUPPORT PYRAMIDAL ROOF.

ported by the facts of architectural history. Every case of its occurrence must be judged on its merits. Is the use of the pilaster, the column, the vaulting-shaft, the decorative pediment, the entablature dividing the stories, the open-work gable, the pinnacle, the coffered ceiling, justified by the value of its decorative effect? Opinions may differ as to any specific case, but the critic cannot in-

details of construction cannot be expressed externally. They constitute the hidden anatomy of the building; which, like that of the human body, although shaping it, is not revealed by it to the eye. The Gothic system of the stone skeleton, externally buttressed because the interior structure is too light, lofty and weak to stand alone, can hardly avoid being expressed externally. But

even in a Gothic building the vaulting—for whose sake the whole structural system has been contrived—is not expressed externally, but is concealed under a steep roof of timber and slate or lead. A building constructed with horizontal ceilings and with floors carried by beams instead of vaults cannot well express this construction either directly or indirectly on the exterior, except as it is suggested by the fenestration. In a building of complex plan, not a unitary or one-room edifice like a temple or church, the interior construction—all that does not abut in the external walls—is of necessity invisible. In a building between party walls the façade is perforce reduced to a practically flat composition of voids and solids which can only rarely be made to tell the story of the interior. It is evident in all these cases, as in many others, that the law of structural expression cannot be applied in a hard-and-fast manner; it must be variously interpreted, variously modified, even in many cases excepted from; in other words, it is open to discussion and amendment, and may prove to be not a law at all, but a variable criterion, perfectly just in some cases yet quite invalid in others.

Having reached this conclusion, the inquisitive reader who refuses to take his criteria ready-made may now go further and ask: "Why must an architectural design express construction? Is a building designed for the purpose of showing its construction, or the construction designed for the purpose of producing the building? Is construction the end or the means, the mistress or the servant of architecture?"

These are questions that go to the very root and core of architectural criticism. They are not to be lightly brushed aside nor answered offhand.

If architecture may be properly defined, as I think it may, as "the art of building beautifully" or "the art of designing beautiful buildings," then the primary purpose of architecture is beauty, the giving of pleasure to the esthetic sense through visible form, and construction is the means to this end,

the servant and not the mistress of architecture. To design a building with primary reference to its beauty of visible form and to make the construction serve the purpose of giving stability to this form is at least as logical as to make the structural framework dominate the design, and subordinate the decorative treatment to the display or expression of that framework. Either procedure is logical in itself. Whether a given problem should be approached primarily from the side of construction, or from the side of beauty of form and detail and decorative effect, must depend upon the conditions of the problem—the purpose and nature of the building, the materials and resources available, the site and environment and other like conditions. There is no law of esthetic "morals" to compel the display of the internal structure, that is, of the means by which stability is effected. But it is imperative that a building shall *look* secure, capable of standing up; that the eye shall see an adequate support for every visible supported feature. The doctrine that the hidden strains, the invisible forces at work in a building, ought to be suggested or revealed and to be resisted by visible means is a pernicious doctrine, without basis in common reason. Only when the visible form of a structure itself suggests to the ordinary spectator the presence and action of some disruptive force does it become imperative to provide a visible resistance to that strain.

This objectionable doctrine is invoked with a certain plausibility by the hostile critics in condemnation of the most brilliant and original of the architectural inventions of the Renaissance—the lantern-bearing dome on a drum. They contend that the thrust of such a dome demands an external design having sufficient abutment to resist it with no aid from concealed chains or belts; or that failing this, the drum should be carried high enough to provide a vertical load sufficient to ensure the stability of the whole, and that the whole should then be covered with a protective roof up to the lantern. This was done, we are reminded, with the dome of the Florentine

Baptistry; and although this arrangement would have entirely concealed the magnificent dome for whose stability it should have been provided, Brunelleschi should nevertheless have made this sacrifice in the interests of "truthful" con-

and beautiful form possible, both lofty and spacious, with which to cover the vast unencumbered space where nave, choir and transepts meet. Not only would the proposed huge cylinder topped by a cone or pyramid have been a most



DOME OF CATHEDRAL OF FLORENCE. DESIGN EXPRESSES STRUCTURAL SYSTEM; INVISIBLE STRAINS RESISTED BY CONCEALED BELTS.

struction! And by parity of reasoning Michel Angelo should have done the same with the dome of St. Peter's!

I think we may rejoice that these two Renaissance architects were wiser than their latter-day critics. Their purpose was indeed not to express construction, but to express the majesty and glory of the Church—a much nobler and loftier purpose—by the most imposing

woeful sacrifice of beauty to construction, but it would have produced an architectural solecism, one of the very "falsehoods" against which the critics are so severe. For it would have completely hidden the essential structure—the dome; and would have given to the lantern the appearance of resting on a low pyramid or cone of slate or lead! Such are the dilemmas into which we



DRUM OF ST. PETER'S. BUTTRESSES OF DRUM PRODUCE SATISFACTORY EXPRESSION OF STABILITY.

are sometimes led by the rigid application of this alleged axiom of esthetic morals to the masterpieces of the Renaissance.

This sort of criticism Mr. Geoffrey Scott, in his suggestive and informing book on "The Architecture of Humanism," has called the Mechanical Fallacy. "Why," says he "are we to conjure up the hidden forces of the dome and refuse to think of the chains which counteract them?" In other words, why may not a concealed resistance be opposed to a hidden force? What sense is there in forbidding the use of any rational, practical means that is effective in securing stability, provided the structure in its masses and details suggests stability and sufficiency of means to ends? Is a chain or belt esthetically immoral? Then surely all cramping and doweling of masonry, and all the elaborate medieval systems of concealed metal

chainages described by Viollet-le-Duc, must be esthetically immoral, as being concealed devices for stability.

III

But the critics have another charge to make against both Roman and Renaissance architecture. The decorative forms employed, both on the exterior and interior, particularly the structural forms used for ornament, such as engaged columns and pilasters and wall-arcades, and pediments over doors and windows, are false, because they suggest a construction which does not really exist, at least as a part of the essential structure of the edifice. It is a fictitious construction, applied as a dress, and to strip it away would not endanger the real structure.

This is alleged, for example, of the entire system of façade decoration by pilasters and entablatures introduced by Alberti in the Rucellai Palace at Flor-

ence, and further developed by Bramante in his Roman works; of the similar use of pilasters in the interior of the Pazzi Chapel; and of the arch-and-order combination as a whole, wherever used. If the objection is well taken and is as serious and fundamental as the critics would have us believe, it condemns a very large part of the architecture of the Renaissance throughout Europe, as well as of the architecture of more modern times, and is, therefore, deserving of the most careful examination. This sweeping verdict, however, is just what some, at least, of the hostile critics intend, and they are not at all disturbed by the havoc it works among the masterpieces of whole ages and the reputations of great and famous men; nor do they hesitate at the slap it administers to all the multitudes of educated people, supposedly possessed of good sense and taste, who have admired and even still admire the artistic product of what

Ruskin calls "the foul torrent of the Renaissance."

But alas, this verdict does far more than this, for it condemns also the authors of a large part of the product of the Middle Ages, and sweeps away such a vast mass of gables, pinnacles, vaulting-shafts, and utterly "useless" moldings, traceries, false gargoyles and non-structural carvings, and then working back into the ages wrecks so much of Roman architecture, not sparing the Egyptians nor even the sacrosanct works of the Greeks, that the critics may themselves be inclined to cry Halt!

Is it not conceivable that the objection is after all not well taken, and that there may be a real justification for that whole extensive category of forms of decoration against which it has been raised?

A critical analysis of the objection seems to show that it contains two implications: that such pseudo-structural decoration is *useless* structurally, and



COURT OF FARNESE PALACE, ROME. EXAMPLE OF RENAISSANCE ARCH-AND-ORDER DESIGN.

that it is *deceptive*—a sham, as the critics like to call it. Or we may state these implications conversely thus: all decoration of an architectural character must be a part of the real structure of the edifice, and there must be no deception nor illusion in decoration. All this sounds plausible, and the reference to deception seems to imply some sort of moral dereliction. We hate most kinds of fraud, and are thus easily led to believe that we ought to be shocked at any and all artistic deception.

To this the rejoinder may be made that deception, or that kind of deception which we call illusion, is of the very essence of certain forms of art, and that such "deception" is enjoyable and not in the least objectionable. This, however, is not a sufficient reply, nor indeed, a fair one; for the illusions we enjoy—like those, for example, of the theatre—are illusions which we expect and desire. It can hardly be said that we particularly *desire* to be deceived by architectural forms; we certainly would not go out of our way for the purpose

of experiencing an architectural illusion, as we do to experience the illusions of a theatrical stage and of the performance upon it. But it is fair to say that the alleged deceptiveness or falsehood or dishonesty (to use the language of the critics) of the architectural forms of the Renaissance is of no consequence whatever. That is to say, if these forms and designs do produce the illusion of a non-existent construction, the illusion does no harm whatever; it wholly fails to shock our moral sense, and I doubt whether, even when the "deception" is revealed to the spectator, his sense of intellectual propriety is disturbed in any appreciable degree. He accepts the design for what it was intended to be—an effort to decorate a wall, a structure, to enrich its surface and make it interesting or beautiful; and it makes no difference to him whether the pilasters or columns are an essential part of the wall or not, or whether the entablature is carried by the wall or by the columns which to the eye support it. As a matter of fact, it may be doubted whether



FAÇADE OF MONASTERY AT PIEDRA, SPAIN. ORDERS EMPLOYED FRANKLY AND OBVIOUSLY AS A WALL DECORATION.

the alleged deception, the illusion of a non-existent construction, has any real existence outside of the minds of the purist critics themselves. The decorative purpose of the forms and features under criticism is so obvious, and their

into the criticism of the decorative apparatus of a style or of a building, next to the inquiry whether it performs satisfactorily its primary function of decorative effect, is the question of its propriety, of its fitness for its place in that



S. MARIA DELLA SALUTE, VENICE. LANTERN CROWNED DOME ON A DRUM.

decorative effect so successful, that it is perfectly natural and proper to accept them and enjoy them without even a tincture of shame or vexation at the supposed effort to fool us. We are not shocked at the gilding of a picture frame, nor fooled into thinking it of solid gold; we know there was no intent to deceive, and we accept, as of course, the purely decorative purpose of the thin layer of gold.

The real question that ought to enter

particular design, of its harmony with its environment, with its material, with the scale and character of the building. The great pother raised by Fergusson and his followers about the "truth" or "falseness" of Renaissance design has too often obscured the really valid and significant factors of a just criticism. When one devotes one's attention to asking whether each detail is a "useful" part of the construction and whether it does or does not deceive by simulating a fic-

titious construction, one is apt to forget the essentials of design—good proportion, correct treatment of scale, the proper balance between variety and unity, beauty of line and of surface, the harmonious distribution of voids and

tion between Gothic and Renaissance architecture which is worthy of notice. Gothic architecture, he says in substance, is *organized* architecture; Renaissance architecture is *arranged* architecture. There is a measure of truth in this dis-



COURT OF BEVILACQUA PALACE, VERONA. TYPE OF THE RENAISSANCE ARCADED COURTYARD.

solids; these and other like considerations, to say nothing of the planning and general conception of the building.

IV

Mr. Claude Fayette Bragdon, who has written entertainingly and suggestively on architecture, the fourth dimension, projective ornament and other subjects connected directly or indirectly with design, has more than once drawn a dis-

inction, if we correctly understand the meaning of the two words "arranged" and "organized" and rightly limit the field of their application. In both architectures there must of necessity be both organization and arrangement, for no building can stand unless it is structurally organized, and no designer ever produced a work of architecture or of any other art without arranging the elements of his design. But it is quite fair to

say that the Gothic builders started with construction, which means organization, and proceeded from that to decoration or the arranging of the design or of its details for the production of decorative effect; while the Renaissance architects started with the decorative effect they had in mind and arranged their organized construction so as to serve that purpose. The two elements of organization and arrangement are present in both cases, but their relative order of importance and their order in thought are reversed.

This distinction, thus understood and thus limited, is closely related to one of the three fundamental differences between the two styles which I pointed out in the first paper of this series. I venture to quote from that article:*

"In all classic and neo-classic design the architect expresses his conceptions by means of an alphabet of element-forms already perfected, wrought to a species of finality by centuries of experimentation. The types of these element-forms are fixed: the designer reveals his artistic quality in the way he composes his design with these elements, in the refinement of his proportions, in the infinitely varied subtleties of his profiles, the variations of the details, the harmony and rhythm of his *ensemble* and of its decoration. In Renaissance architecture these fixed or conventional type-forms are adapted to an infinite variety of kinds and types of buildings, utterly diverse in plan, mass, proportions and purpose. In Gothic architecture, on the other hand, it is the general type of the building that is fixed—that of the several-aisled cruciform church with high vault and towers—and the form-elements that are endlessly varied."

In the marvelous skill with which the Renaissance made use of its alphabet of form-elements, creating with the old and long-familiar characters a new language wherewith to utter new thoughts, in the dignity and nobility of the new conceptions and the beauty of the dress in which they were presented to human view, the Renaissance displayed artistic gifts and a measure of creative inspiration no whit inferior to those of the

medieval church-builders, though differing in kind. They bequeathed to humanity an inestimable gift of loveliness and delight in builded form and decoration, and it betrays a strange blindness to the rightful claims of artistic beauty when a critic allows himself to be misled by fine phrases and the jargon of a transcendental mixture of morals with esthetics, into the attitude of a general and all-including contempt of the Renaissance and its works.

To call Renaissance architecture an "arranged" architecture, if this is meant as a general condemnation and signifies anything else than what I have above suggested or implied (the arrangement or disposing of the superficial decorative features of the design upon the organic core of the structure), is therefore a misleading and an unfair use of terms. To quote once more: "The broad-minded critic makes the necessary distinctions, recognizing that in the world of architecture there is room for both kinds."

V.

In these four papers I cannot claim to have answered all the animadversions, or exposed all the fallacies, of that criticism which starts out with the allegation, direct or implied, of the essential wrongness, the fundamental objectionableness, of Renaissance architecture in general and particularly of that of the Italians. I have only touched its high points, the basic errors and assumptions which vitiate its judgments. To meet in detail its various attacks upon scores of masterpieces, which somehow continue to win the admiration of the majority of mankind, including many persons in learning and culture quite equal to the assailants, would require a volume, and even those which most tempt one to re-joiner must be passed over.

If in this and the foregoing papers of this series I have given the impression of an indiscriminating partisanship for Renaissance architecture, of blind admiration and refusal to recognize patent faults, the impression is a mistaken one, due to the necessity of defending that architecture against the sweeping verdicts and apparently fundamental hos-

*The Architectural Record, August, 1917.



THE MINT AND THE LIBRARY OF ST. MARK, VENICE.

tility of the critics. A blanket indictment seems to demand a blanket defense. I do not pretend to praise all Renaissance architecture nor to defend all its practices and devices, but I do wish to protest against any condemnation of the entire product of a great age of wonderful architectural activity, on the strength of criteria based on fundamental assumptions which are, in my judgment, wholly untenable. I feel that a protest should be entered against that conception of construction which requires it to dominate instead of serving beauty of form; that attitude which leads even the usually sympathetic Professor Frothingham to say of the Italians that they were "the least constructive nation in Europe"—the Italians, who in ancient days built the Pantheon, the Baths of Caracalla and the Basilica of Maxentius, and in later times reared the unrivaled domes of Santa Maria del Fiore at Florence and of St. Peter's at Rome, over

two of the mightiest temples ever built by Christian hands!

No, I would object as strenuously to an uncritical and sweeping laudation of the Renaissance architecture of Italy as to the sort of fault-finding with which I have been finding fault. I ask only that this architecture be judged upon its merits, with clear understanding of its problems, its conditions and its purposes. I ask of its critics the laying aside of prejudice or dislike springing from the study of other styles, and a sincere effort to approach their subject sympathetically, to penetrate to the real spring and inspiration, the ideals and aims of the Renaissance designers. I ask that full justice be done to the beauty of the product, the excellence of the planning, the nobility of the interiors, the splendor of the ensembles, the loveliness of the decorations of the Renaissance. I ask recognition of the marvelous way in which it solved the host of

new problems with which the blossoming of a new culture confronted it. I ask its acquittal of the charges of copyism, servile imitation, untruthfulness, fraud and sham laid against the style as a whole or against its great masterpieces, I call attention to the originality and beauty of the two great contributions of the Italian Renaissance to architecture—the lantern-crowned dome on a drum and the arcaded palace-courtyard, each based on age-old elements yet none the less splendid new creations.

If we can get rid of the notion that somewhere between 1400 and 1500 the Italians suddenly threw off all honesty and principle in design, becoming at the same time the most extraordinarily prolific producers of beautiful works of art and the most servile copyists of a long dead style, designing false buildings which are base deceptions, frauds and shams, although marvelously beautiful; if we can for a time forget the preaching of those who, from their pulpits of assumed esthetic superiority of judgment, so loftily magnify the errors and minimize the merits of this architecture, we may then approach it with a fair chance of appraising it with tolerable correctness. We shall learn to distinguish between the formative Quattrocento, the culminating Middle or High Renaissance, and the gradual but progressive decline thereafter, through the various stages of the Barocco to the really imitative age of the eighteenth and early nineteenth century, each period having its own differing merits and defects. We shall recognize both the excellences and the failures of Renaissance design, its great strength, its versatility in decoration as well as the mistaken ways in which it sometimes sought to produce decorative effect—as in making church fronts mere screens unrelated to the church behind them.* We shall ap-

preciate the soundness and good sense of much Renaissance construction, while recognizing in certain cases the failure to extract from the construction itself the full measure of its decorative possibilities. We shall be free to enjoy to the full the nobility of its palace façades, the swelling majesty of its churchly domes, the magnificence of its courtyards, the dignity of its interiors, the beauty of its ornament. We shall feel equally free to condemn the stucco shams of the Baroque Jesuit churches and the infelicities of any design that offends us by inappropriate detail, unhappy proportions, wrong scale or any other fault. In short, we shall try to judge each work according to the problem it presented to the architect and the solution he adopted for it, using such common sense as God has endowed us with and such measure of good taste as we may have been able to acquire. And we shall refuse to call Brunelleschi, Bramante, Peruzzi, Sansovino and Michelangelo, either directly or by implication, copyists, liars or frauds.

Such I believe to be the program and such the fair and proper attitude of the critic of architecture, whatever the style or period with which he deals.

The derivative Renaissance architectures of France, Spain, the Low Countries, England, Germany and other countries, sprung from seeds of the Italian carried West and North by various agencies and currents, the critic should examine in the same spirit, applying such criteria as seem relevant in each case and giving full weight to those considerations of race, climate, previously existing traditions and the like, which were concerned in the evolution of each style. Only by such sympathetic study, free from bias and preconception, examining each development in the light of the conditions out of which it grew, can we rightly read the lesson of the Renaissance or of any other great period of art. "With malice toward none, with charity to all" is an excellent motto for critics in dealing with the styles.

*This is not, however, a fault especially of the Renaissance, but of Italian practice generally through the entire Middle Ages as well as in the Renaissance. Nor is it unknown even in French Gothic architecture, as Mr. Roger Gilman has shown in a penetrating article as "Gothic Architecture and Shell Fire" in the April Journal of the Archaeological Institute.



DECORATED PLASTER CEILING IN
THE CASTELLO SANT' ANGELO, ROME.
RENDERED DRAWING BY ARTHUR BYNE.

ARTHUR BYNE'S RENDERINGS AND WATER-COLORS



By Mildred Stapley

WE are considering in this article the drawing and painting of Mr. Arthur Byne, whose Spanish scenes have been appearing for some time past as covers to the *Architectural Record*. Trained in the School of Architecture of the University of Pennsylvania, Mr. Byne continued his studies in the American Academy in Rome. On returning to New York, he entered the office of Messrs. Howells and Stokes, where he remained until 1914, when he undertook some special work for The Hispanic Society of America. At this he is still engaged, spending most of his time in Spain.

Nothing more unexpected could have befallen a practical young architect who up to that time had been chiefly occupied with modern American building; but it happened that he and his wife, after making a trip to Spain in 1910, determined to seriously study the architecture of that practically unexplored country. Their guide-book was George Street's *Gothic Architecture in Spain*. In tracking down Gothic monuments, however, other and more racial phases of the great art as practiced in Spain attracted them. The Plateresque, or Renaissance period, they found, bore a very individual stamp, yet had not received the attention it deserved, foreign or native. They decided on annual visits for the purpose of studying it and gathering material for a book on the subject.

As the preparation of this work advanced, such a wealth of accessory products—woodcarving, ironwork, silverwork, furniture, textiles, etc.—beckoned that even these most earnest students of the Plateresque Style could not resist the temptation to tread frequent by-paths. Long before the matter originally designated had been prepared, innumerable photographs and measured drawings of other subjects had been amassed,

chiefly ironwork. These last, coming to the attention of The Hispanic Society of America, were published with descriptive text by Mrs. Byne under the title of *Rejería of the Spanish Renaissance* (Number 87 of the Society's publications, 1913). The *Rejería* (iron screens) was followed by a general handbook on Spanish ironwork. Next came the book first planned, *Spanish Architecture of the Sixteenth Century*, and quite recently, *Decorated Wooden Ceilings in Spain*. These, along with other volumes still in the making, have temporarily banished the practice of architecture.

The great value of all these works is their unstinting graphic presentation Mr. Byne loves to draw. He takes delight in examining a monument down to the last detail; then equal delight in making a straightforward transcript of what he has seen. It is this liberality of personal illustration, if one may thus differentiate drawings from photographic reproductions, that widen the scope of the Byne books beyond that of any others yet published on Spanish architecture. It is Mr. Byne's manner of presenting such drawings, as well as others made recently, that we propose to discuss here.

No attempt has been made to collect the more conventional architectural renderings done during his ten years' office experience with Messrs. Howells and Stokes, New York. During that time and in collaboration with Mr. Henry Deville, numerous competitive drawings were rendered, including those for the Municipal Building and the Court House. In work of this nature, academic in character, where the rules of the competition or the consensus of office opinion often determined the method of procedure, it would be difficult to lay finger on the personal quality. It seemed preferable to select, therefore, some of the less

restricted efforts dating from student days in Rome. Such are the Arch of Titus appearing as cover to the August, 1919, Record, and the ceiling in the Castello Sant' Angelo illustrated in monotone with the present article. With these to compare with recent work one may study the natural progress of an open mind and facile hand. In the Roman water colors made some fifteen years ago, the line so dear to every modern-trained architect is carefully preserved and the color dexterously but cautiously applied. In recent work the drawing, or disposing of the pattern on paper, is a matter of a few minutes. Line is subservient to color; and color is no longer a mere matter of staining the paper pleasantly, but of building up impressive masses, for instance, as the ancient bridge of San Martin at Toledo.

However, while still working as an architect only, Mr. Byne tried in the ceiling plan just mentioned to get away from the conventional line drawing and express the texture of the surface he was trying to represent: namely, decorated stucco. True, the outline was all laboriously inked-in, though very lightly; then it was just as laboriously washed down so that the delicately modeled highlights should not be overpowered by assertive lines. It is no attempt at sparkling line work, which was decidedly a fad with students of that day; a fad which, according to many observers, was responsible for the lack of sentiment in subsequent executed work. It is quite believable that if a little more sentiment were encouraged to creep into architectural renderings the interpretation in stone and wood might be more sympathetic.

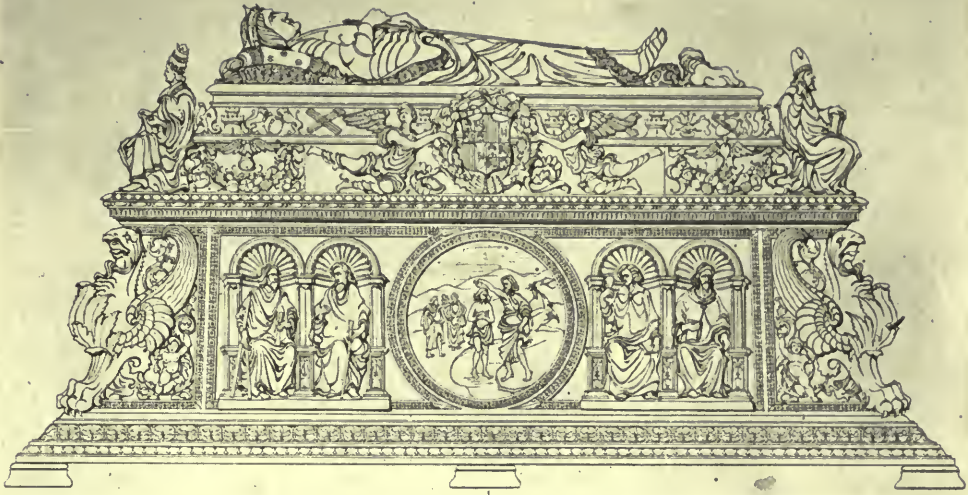
The drawings reproduced from The Hispanic Society's publications, some in line, some in wash, are as varied in treatment as they are in subject. The frontispiece of the Rejeria is the painted heraldic panel over the central doors of the mighty iron grille in the Royal Chapel of Granada. The drawing measures six-teen inches by twenty-four inches. It is in pencil and is rendered in color and gold, being remarkably faithful to the original, which, it is claimed, has never

been repainted or gilded since its erection in 1523. Enough of the surrounding bars and embossed horizontals have been included in the composition to give an idea of the splendid quality of Spanish smithing. The descriptive lettering, Mr. Byne's own contribution to the page, adds not a little to its charm. It seems hardly necessary to remark, in passing, that there would have been half a dozen less attractive ways of rendering a bit of painted ironwork.

Very much smaller in spite of the wealth of detail they contain are the Plateresque drawings. To one accustomed to the repose and fluent line of Italian ornament it required some readjustment of mind and hand to interpret the agitation and nervousness of the Spanish style. The drawn line could not be coldly uniform throughout, but had to be itself modeled in order to express the robustness of the carved stone or wood. Hence the special character of line used for the portal from the Archbishops' Palace at Alcala; or the combination of pencil and india-ink wash on rough paper to express the façade of the Casa de las Muertes, Salamanca, where there is much fine carving in coarse local sandstone. On the other hand extremely delicate penwork, especially considering that the drawing is only seven by twelve inches, is seen in the tomb of Ferdinand and Isabella, at Granada. This is strictly an architectural drawing, in that nothing is left to the imagination. Yet it is not merely line for line's sake; it is not flat, but suggests a certain amount of modeling, even more evident in the original than in the reproduction.

In entirely different vein are the two monotone drawings made several years ago to illustrate a tale of medieval France. The architecture, while carefully delineated, is used decoratively, making the *mise en scène* for an incident told by the figures in the foreground; but they would be easily recognized as an architect's work, although their special technique would probably never be recommended in any course on architectural rendering.

Some six years ago while still busy preparing books Mr. Byne began to paint



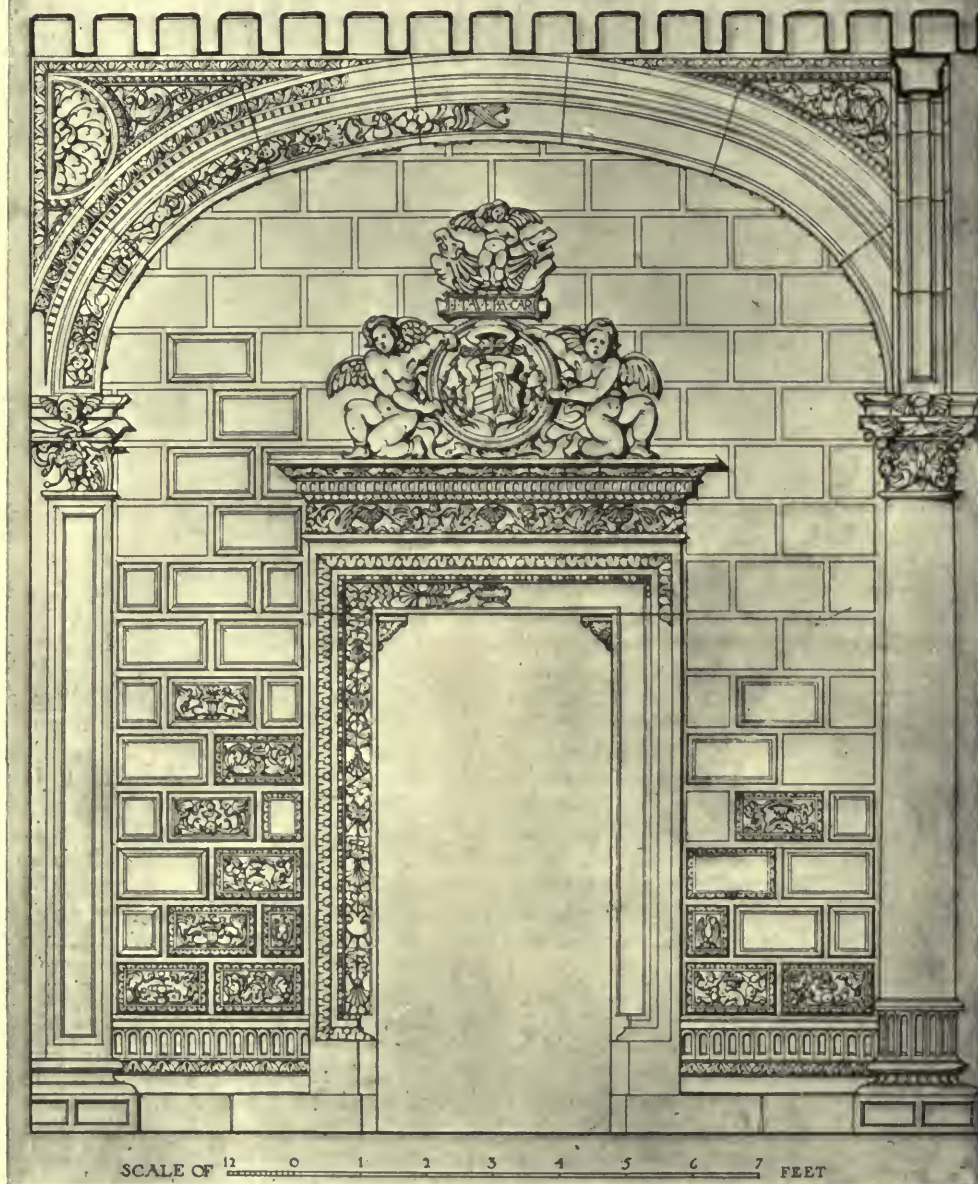
TOMB OF THE CATHOLIC SOVEREIGNS IN THE CAPILLA REAL, GRANADA.
 From "Spanish Architecture of the Sixteenth Century." By Permission of
 The Hispanic Society of America.

the irresistible Spanish landscape. Leisure for this sympathetic task came only at rare intervals; in fact during his last two visits to Spain no opportunity whatever presented itself for continuing a work so promisingly begun, so that his output thus far has been necessarily small. In Madrid and New York he has held one-man shows, and at the Panama Exposition his envoi was accorded a separate alcove and received a silver medal. The medium is pure water color free from gouache or Chinese white, and the manner of using it is most unusual and interesting. In technique, in the choice of subject, and in the large scale of the pictures, the temperament of the man is revealed as it never could be in the more limited field of architectural draughtsmanship. As is natural, masonry figures largely in his pictures—Roman aqueducts and bridges, Moorish gates, Spanish castles, all make special appeal, particularly when they stand, as so many great monuments do in Spain, abandoned, yet strong and defiant. Without feeling a great interest in the locality Mr. Byne never paints, and thus far the locality that has most interested him has been

stern Castile rather than smiling Andalusia.

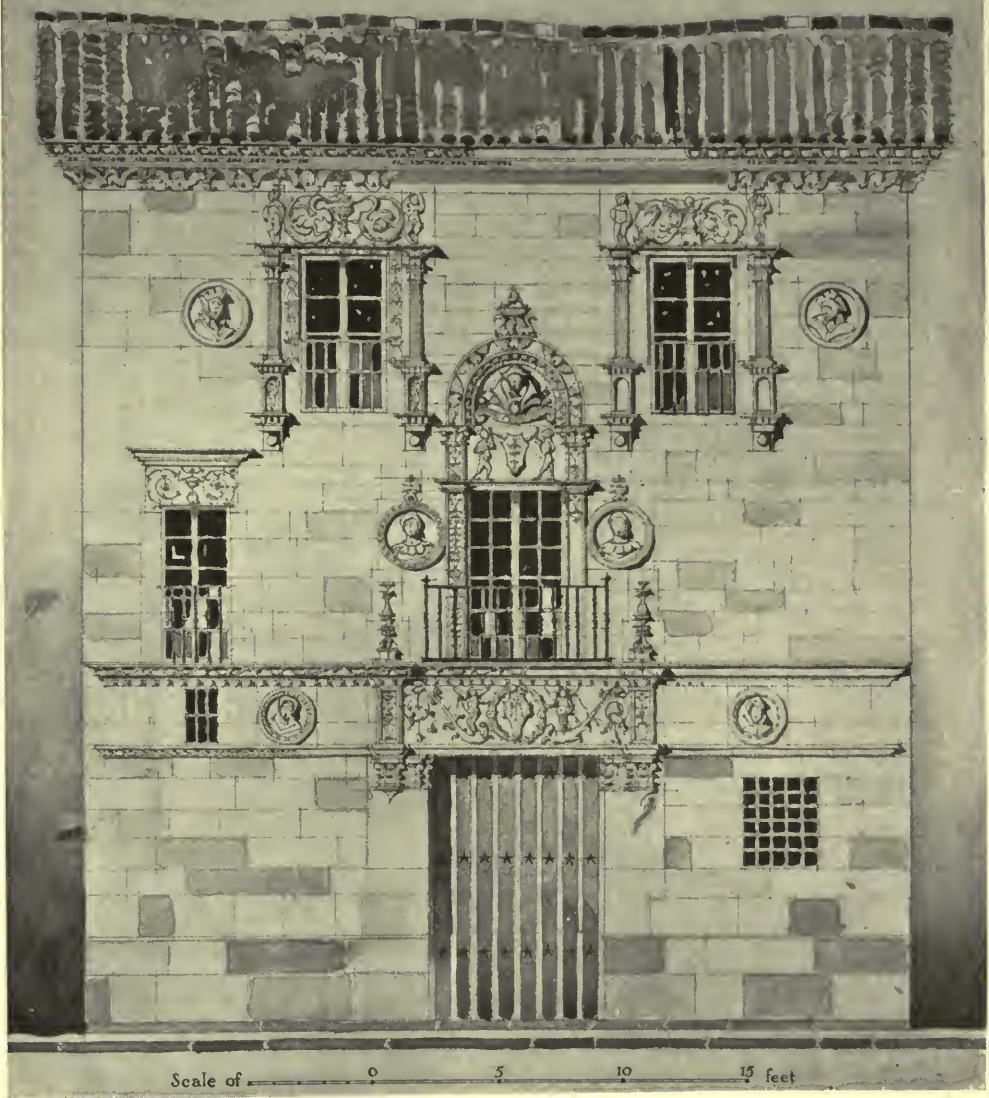
Of first essays in painting the Architectural Record has published the Portico de la Gloria of Santiago Cathedral (September, 1917), a view of Segovia (August, 1917), and several others, while the Tarragona Cloister appeared January, 1920. These were straightforward painting, high in key, with the medium fluid and the brush kept full. It is surprising how little line preoccupies the artist. Even so architectural a subject as the famous Santiago portal is seen not so much with Street's joy in discovering one of the architectural glories of Christendom, as with a painter's delight in finding aged marble turned sea-green. The sketch represents a matter of two hours' work on the spot and was never touched afterwards. It recalls Philip Gilbert Hamerton's phrase, "the genius of elimination," without which, he said, no etcher could be a good etcher. What Mr. Byne put into this composition of naive twelfth-century figures is only a hundredth part of what he left out; but there is no doubt that had he sat before the subject as an architect, bent on mak-

ALCALA DE HENARES
A DOORWAY IN THE ARCHIEPISCOPAL PALACE

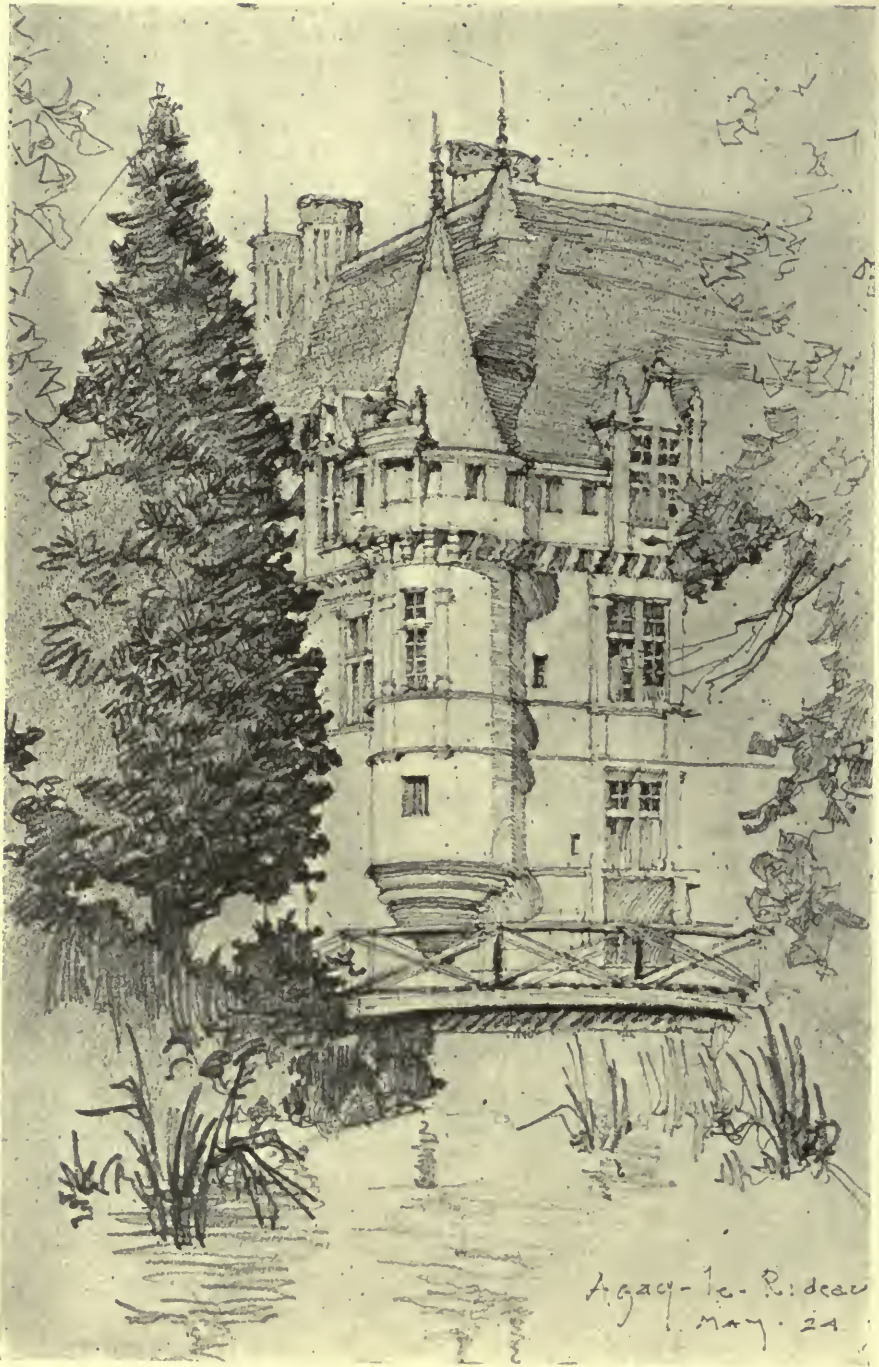


A DOORWAY IN THE ARCHBISHOPS'
PALACE, ALCALA DE HENARES.
From "Spanish Architecture of the
Sixteenth Century." By Permission of
The Hispanic Society of America.

CASA DE LAS MUERTES - SALAMANCA



CASA DE LAS MUERTES, SALAMANCA.
 From "Spanish Architecture of the Sixteenth
 Century." By Permission of The Hispanic
 Society of America.



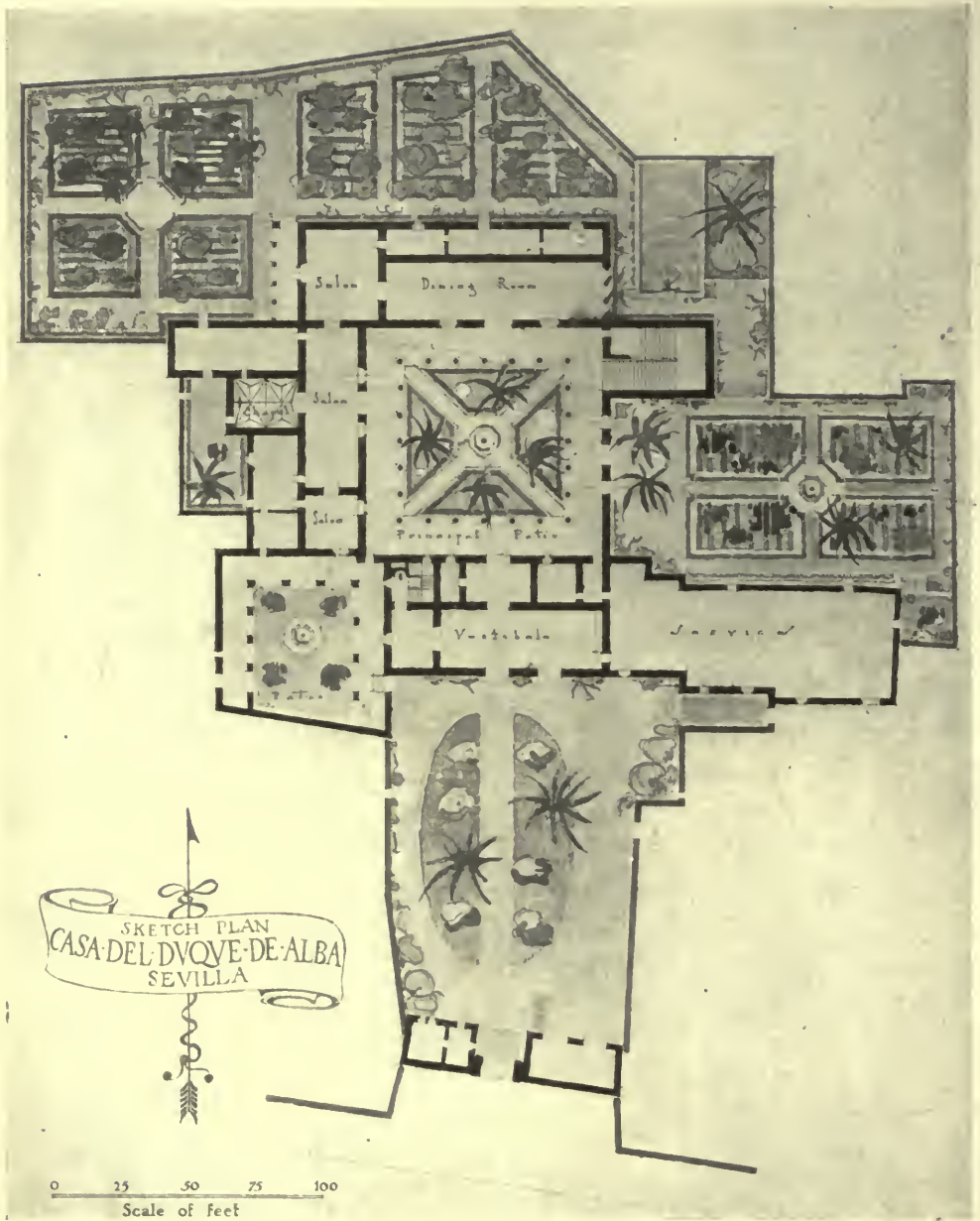
1 CHÂTEAU OF AZAY-LE-RIDEAU, FRANCE.

CENTRAL MOTIF OF THE COLOSSAL IRON REJA OF THE ROYAL CHAPEL AT GRANADA SHOWING THE ESCUTCHEONS OF THE CATHOLIC KINGS WHO LIE ENTOMBED THERE AND OF THEIR GRANDSON CHARLES V. WHO ORDERED THIS EMBELLISHMENT

THE REJERO WAS ONE MASTRE BARTOLOME OF JAEN WHO EXECUTED IT BETWEEN THE YEARS 1518 & 1523 AND WHOSE NAME IS ON THE FRIEZE



FRONTISPIECE FROM "REJERIA OF THE SPANISH RENAISSANCE." By Permission of The Hispanic Society of America.



PLAN OF THE CASA DEL
DUQUE DE ALVA, SEVILLE.
From "Spanish Architecture of
The Sixteenth Century." By
Permission of The Hispanic
Society of America.



BRIDGE OF SAN MARTIN, TOLEDO.



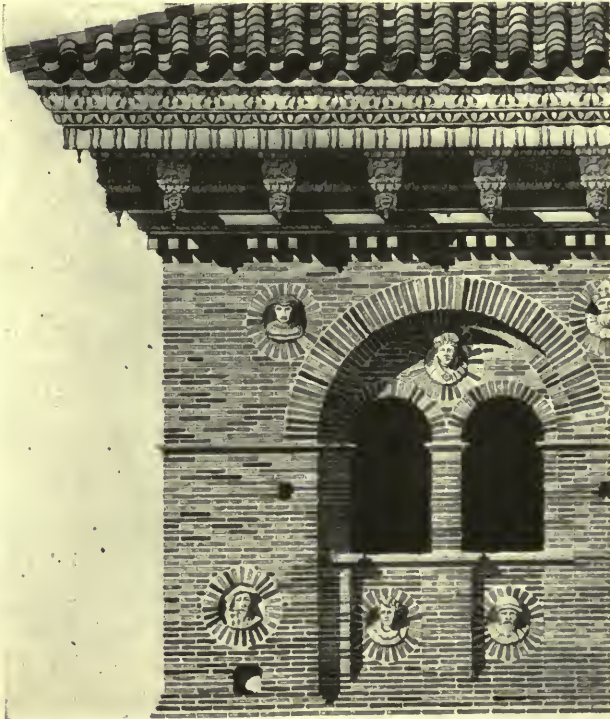
ILLUSTRATION FOR "THE
BLACK HERMIT OF PONTOISE."

ing a pen-drawing, the omissions would have been very few.

Later paintings, of which unfortunately there have been too few, grew richer in pigment, broader in handling, and larger in size. The Aqueduct of Segovia measures two feet by three feet; the Walls of Avila, three feet by six. All were executed in a few hours on the spot, recorded while the impression of their massive beauty was fresh in the mind; and, likely as not, that very same night the painter became architect again and devoted several hours to an almost meticulous rendering in pen and ink of some bit of Spanish Plateresque ornament. While the color here in the Aqueduct is applied thick, in short definite strokes instead of in the limpid fluent manner of earlier work, the medium ever loses its

brilliancy. "If you can handle paint like that, why not use oils?" ask the painters; and the reply is, "Because I want to show that water color is a facile, rich medium of great possibilities. Moreover I love its mat texture so like the old frescoes, also the precision of touch it requires. One has to paint the entire picture in his mind before starting, for there can be no bungling or changing afterwards. It must be a single impression, quickly interpreted and then left for better or worse."

Critics have been kind enough to think that it has been for better; and it is to be hoped that Mr. Byne, now that he is again in Spain, may be able to devote more time to painting that curiously picturesque land before he comes back to New York.



WOOD CORNICE OF THE LONJA, ZARAGOZA.
From "Spanish Architecture of the Sixteenth Century."
By Permission of The Hispanic Society of America.



REAR VIEW—"RIDGEHANGER," EALING, MIDDLE-
SEX, ENGLAND. ROBERT ATKINSON, ARCHITECT.

SOME PRINCIPLES OF SMALL HOUSE DESIGN

© By ©

JOHN TAYLOR BOYD, JR.

Part VII Interiors

THE interior of a house should embody the highest expression of the art of the home. Although the environment of the neighborhood outside may dictate the arrangement of land and the practical side of the house plan and may influence the elevations, and although the influence of these externals may penetrate the interior, still the interior is the place above all others where is symbolized the ideal of the family. The interior is the hearth itself. If art is to be sacrificed anywhere in the small house, let the interior be the last part of it to suffer.

Since the interior is the essence of the home, it is most unfortunate that, at such a critical point in the intricate process of designing a small house, there should be a rift, a cleavage in design, which too often brings down failure upon the whole project. I refer to the cleavage made by dividing the field of interior design between the two specialties of architecture and interior decoration. The two arts overlap or sometimes leave a gap between them that is evident in the completed work. That is why you will often see interiors which are two separate designs—one, the work of the architect who has conceived the plans and shapes and the details of the shell of the interior, who has wrought them with one clear picture in mind; and the other, the design executed by the decorator in the finishing touches of color, furniture, fixtures and hangings, thus planting on the first design a secondary one of an entirely different pattern. Such an interior is twins—twins, but with no family likeness between them, sometimes not even a racial one!

At this point I wish to avoid any misunderstanding. The criticism does not apply to a minority of houses in which the break in design does not appear—in which the primary design of architecture and the secondary design of furnishings are one, as they should be. Nor is it meant personally as an argument against interior decoration. Interior decorators have put forth fine efforts in the development of a discriminating national taste in interiors. In this they have been aided by an excellent press, which has rendered valuable service in leadership. A difficult, patient task it is, and one that too many architects have avoided. Only a minority of men have followed the example first set by Charles A. Platt and Stanford White, although the last few years have seen a rapid increase in the ranks of architects who are skilled in the art of interiors.

But, in spite of the progress in standards, many architects still design houses with practical plans and excellent exteriors, the latter carefully wrought in every line; but in which the interiors show scarcely a trace of any definite artistic conception. The ablest decorator, if called upon, could not rescue such a design from mediocrity.

Another fault of the architect in interior design has been mentioned in previous issues of this series; that is, the perfunctory use of types of plans particularly of the stock plan. I have mentioned how this stock plan has deadlocked interior decoration as well as other features of house design—lot plan, house plan and elevations. With the incessant repetition, common in small

houses, of box-like rooms and spaces, all about alike in size, shape and character, alike even in details, and fitted together always in the same way, individuality is stifled, and inspiration seems visionary to think of. As a very able decorator said to me recently: "When I pass by these little houses in the suburbs I know exactly what is in them. I can tell you the shapes and dimensions of the rooms, even to the dimensions of the openings and fireplaces; how the rooms are located; what kind of furniture is in each room; how it is placed—yes, and I can even tell you the dimensions of the furniture!" Although he said this in a jocular mood, the decorator hit the nail on the head. In many of our houses, instead of an art of the hearth, we have a few set formulae of design, repeated in the routine manner of custom and habit.

Like the architects, the decorators suffer from this division between the two specialties in household art, with its consequent lack of responsibility and of mastery of technical knowledge. Perhaps from a worthy desire not to interfere with the architect, interior decoration tends to emphasize finish and furnishings—those final touches in interior art—at the expense of the fundamental design of walls and ceilings and shapes of rooms. This error of over-emphasis of secondary design is encouraged by many of the writings on interior decoration. Such limitation is natural enough, perhaps some of it is unconscious; but it inevitably broadens the rift that has come about in the art of interiors. There are now some excellent books on interior decoration, which contain illuminating discussions of principles of color design and arrangement of furnishings; but they give too little thought to the architectural geometry of the interior, which is the foundation of art and interest in interiors. One may perceive this limitation in some of the illustrations in these books. These are pictures, entitled "Italian style," "English Renaissance room," "Louis XVI boudoir"; but really portraying—what? A design in some historic style of furniture, tapestries, hangings, art objects,

etc., all imposed on another design of a typical American room-shell, undisguised in its American character of shape, size, ceiling height, window and door openings and lighting effects. It is as if a simple, sober American citizen had been dressed up like an early Italian or an English aristocrat or a Parisian gallant! Such an effect, one may believe, confuses the art of the home with the art of the masquerade ball. Though the author of such an anachronism as that described above may urge that it is published as an illustration chiefly of furnishings, and that historic styles should not be copied literally—the vice of the "period" room—nevertheless, two different expressions are contained in such design, which split it into twins. And many people, particularly beginners, will take the writer literally.

One may, therefore, conclude that the need of interior design to-day is something more than a knowledge of how to apply aesthetic principles. The need is also to avoid some common errors that are due not to causes in art, properly speaking—though they may have unfortunate consequences in art; but which are provoked by the economic and technical complications of the times, and which have injured the arts through the vice of specialization. Both architecture and decoration suffer through the division of the field between them. As a result the primary or architectural part of the design is apt to be neglected, not only in its essentials of mass, shapes and coordination and expression, but in the smaller technical details of architecture that mean as much in interiors as in any other portion of the home. The perfunctory use of the stock plan has aided in this confusion. While again it should be observed that, although neither the most gifted architects nor decorators fall into these errors, yet a general tendency to commit them runs through the design of small houses. What is necessary is to recapture the unity of design, to treat the art of interior as a whole. Whether it be designed by one or more persons is a matter of no consequence;



LIVING ROOM—RESIDENCE OF FRANK A. COLBY, ARCHITECT, HARTSDALE, N. Y.

the fundamentals of interior design, the architectural shaping of the interior are the essentials to seek. If they are understood and applied, interior decoration will show to better effect—beautiful clothing on a beautiful body. Interior decoration will be less likely to be deadlocked in formulae and thoughtless habits of design. Then, as a result—carrying the conception of co-ordination further—interior art will not only be improved in itself, but will be better harmonized with the elements of the design outdoors and in the elevations. Only in this way may the art of interiors be rescued from the mediocrity and confusion that now enshrouds it.

Fortunately, it is not difficult to determine what are the fundamentals of interior design. Here one is simply entering upon a region that has long been explored and was richly cultivated before. The trouble with the art of interiors is a matter of neglect and indifference towards well known principles, rather than a hesitation to go forward. For if in lot design there is

much to learn, much to learn also of gardens and planting and form and color and style of architecture; and if in plan new arrangements will evolve in special conditions and as the result of economic changes—in interiors, the essentials are clearly established. If they are practised, progress in styles will easily be adjusted to the tradition.

In any attempt to determine the essentials of the art of interiors, it would seem that the first requirement is to picture the interior of the house as a whole. This should precede consideration of the design of separate rooms and spaces.

In previous articles of this series, there were noted at length many of these essentials of the artistic expression of the interior as a whole. At this point it is well to recall all that has been said in favor of a flexible conception of the house plan, both artistically and practically. The need of creative design to fit each individual case of site and situation and family circumstances; of combining elements of the plan, eliminating



STAIRWAY—RESIDENCE OF FRANK A.
COLBY, ARCHITECT, HARTSDALE, N. Y.

others and adding new features to complete the design in the effort to meet practical requirements and to maintain some air of spaciousness and ease in the small house; how this process should center around the design of the living room, which might thereby be enlarged and developed into greater artistic importance than before—all these principles will stimulate art in the interior as nothing else will. They are the true foundation of interior design. And it is the further development of those principles with particular reference to the artistic expression of the interior that is sought in these pages.

Proceeding with this development of the conception of flexible planning, one of the chief considerations is the proportioning of rooms and spaces. I have pointed out that, with the stock plan reduced to fit small houses, such proportioning—which is mainly the harmonious contrast of large and small, and the design of the space relationships—is nearly impossible. If we carry this idea further we shall see that this design of shapes resembles the design of measures in the plan. There is much room for a flexibility of shapes in the house plan. Nothing adds more to the art of interiors than the taking of this step which immediately breaks the deadlock of the box-shaped room. Curiously enough, many small houses show the paradox of too much variation of shape and form on the exterior, and almost none at all in the interior. In this connection a further exaggeration is to be noted. Some designers have imitated the British house in exterior design, which is exactly that part of it least suited to American conditions; but they have neglected the example set by British interiors, which is much more significant. For Americans, the value of modern English design lies in the tradition of wonderful Gothic variety in shapes of rooms and of the flexible way in which they are combined. This Gothic precept also bids English architects take account of the variety in classic planning which is not at all inconsiderable. The result is a character and consistency in planning in British houses that cannot

be too highly praised. It appeared in the English house at Biddenham, that was illustrated in the third article, and in the charming little house by Robert Atkinson shown herewith. The first was a plan of freer shapes, of a flexible



DETAIL OF ENTRANCE HALL—RESIDENCE
OF FRANK A. COLBY, ARCHITECT,
HARTSDALE, N. Y.

Gothic type; while the second shows a more formal, more severely geometrical arrangement in the Renaissance manner. Considered merely as paper diagrams, these plans reveal unusual character and interest, which is a surface indication, at least, of the art of their interiors.

Flexible design of shapes need not be confined to walls, and this truth explains another cause of the excellence of the



DINING ROOM—RESIDENCE OF FRANK A. COLBY, ARCHITECT, HARTSDALE, N. Y.



VISTA FROM FLOWER ROOM INTO DINING ROOM.



LIVING ROOM—RESIDENCE OF FRANK A. COLBY, ARCHITECT, HARTSDALE, N. Y.



VISTA FROM RECEPTION ROOM INTO LIVING ROOM.

best English plans, as well as the weakness of some of our own. It is, of course, only a matter of *section*, a technical part of design well known to American architects in the design of large buildings. In small houses, the artistic shaping of the section is usually omitted, and we have instead the custom of three equal planes of first and second and third floors cutting rigidly through the house and joined together by the stairwell. When it can be accomplished without artificiality, there are few elements of design which afford greater interest and character—as well as that unexpectedness and vivacity that make for charm—than differences of floor and ceiling levels, and of ceiling shapes. In respect to changes of floor level, I recall an old house in Holderness, New Hampshire, that straggled down a gentle hill slope in a series of large rooms in a line, each two or three steps below the one above. The vista through the rooms was striking indeed, and I have never forgotten it, though I saw it when a boy. This is an extreme case, and I cite it only to emphasize the possible picturesqueness of effect to be gained through changes of floor level. Changes of level appear best when they are a natural result of an uneven site.

In regard to design of ceiling, restrictions of cost forbid elaborately decorated ceilings. It is not, however, generally known that ceilings of simple, vault-like forms, such as flat segments of circles in section, or barrel vaultings, or even simple penetrated vaults, do not add greatly to cost, perhaps not so much as a simple running cornice at the top of a box-like room. The best English designs, and a few American designs of large residences, show a beautiful use of these simple ceiling forms. There are, in addition, many fine examples of rooms of a story and a half such as fascinate beholders in studios, which have the angles replaced with oblique planes, giving a shape to the ceiling of half a hexagon. These larger variations of ceiling shapes may be infinitely varied and enriched by minor details of simple beams or differences of level, linked to-

gether with a beam at the juncture of the ceiling of a main room with the ceilings of alcoves or bay windows. There are endless possibilities on this line of thought on which a volume itself could be written.

It is well, however, not to push this theory of variation of interior shapes and sizes too far; otherwise, interiors will be overdone just as exteriors are often overdone. Variety of itself will not ensure picturesqueness or charm, unless it is expressed in the terms of art. In American houses, too much elaboration on Gothic models will be out of keeping with our simpler American ideals. There are other factors which counsel moderation. With the softer light and mellower atmosphere of the English climate, there is less emphasis of variations and of details in English houses, and this is aided by the English practice of small windows. The late Frank Niles Day explained this principle of the use of small windows, with the window heads kept well down from the ceiling, by saying that it is often desirable to cut down the amount of daylight admitted to a room in order that the ceiling have a slight mellowness and air of mystery. This conception has its value in America, which shall be considered further in detail. The point to be made, here, is that the greater illumination in America makes less detail advisable than in England, where details are less prominent in the mellower light. In our small houses, one or two picturesque motives may be all that is necessary to achieve unusual character in an interior. In walls too much variation of shape should be avoided. In large rooms it may preferably take the form of alcoves or bays, or corners cut off as a sort of bay; and only in minor spaces, such as vestibules, stairs, may the walls be rounded. It is in these minor spaces and elements, especially in fireplaces, that picturesqueness counts for so much. They aid in vistas also, which are a matter of the relationship of the interior as a whole. They are apparent not only as the spectator stays in one spot but as he moves about the



VISTA FROM DINING ROOM—RESIDENCE OF
HERBERT S. DREW, ESQ., BELMONT, MASS.
GRANDGENT & ELWELL, ARCHITECTS.

house or enters or leaves it. This last consideration, in the technical language of architecture, belongs to communication and circulation, which, it should be remembered, has an artistic as well as a practical side.

The proper lighting of the interior has a greater bearing on the flexible design of the interior than is generally appreciated. Again one is obliged to call attention to the superiority of British houses, particularly of those designed in the Gothic vernacular tradition. The control of daylight in design, contrasting dim light, or moderate light, in some parts of the house, against a huge beam of sunlight flooding in through a bay or through a tall mullioned window, is one of the most beautiful devices in the whole range of interior decoration. When we think of the recent progress in artificial illumination, of the distinction in interior effects that has come through using table lamps and portable lamps on standards, which light up that part of the room where centers the chief interest of the art of interiors (which is none other than the humans) throwing it into high relief and leaving the rest of the room in gloom through which the color and gilt of decoration glows and gleams—we have ideas for pictures that might apply to daylight illumination. But somehow, our best light of all, sunlight, is too little considered on the side of design. There is, however, less flexibility of control with daylight, which is fixed in position. Artificial light may be moved about, so to speak, thus varying the centre of interest of design and maintaining it always on people. Light may be colored, both sunlight and artificial light, using curtains or transparent shades in each case, although this color needs to be slightly roseate, to meet the wishes of the ladies.

With daylight, some of the same design is possible, as we have seen. It should be adjusted to American conditions of glare of sunlight and to the fondness of Americans for this light, together with the requirement of great window ventilation in summer. Some English houses seem extreme, under-il-

luminated, with principal rooms lit by windows that are hardly more than slits. On the other hand, many of our houses are equally over-illuminated, pierced with windows everywhere, as many as two in one wall in a small room. The windows are evidently too large, a fact proved by the attempt to cut them down with various sets of curtains or hangings, or the unbecoming window shades. Furthermore, there is no proportion in the distribution of such lighting; it is diffused everywhere alike until the house is illuminated like a factory. Some of the houses that have been published in this series are excellent examples of artistic lighting of daylight in well proportioned volume and intensity. Mr. Colby's living room is illuminated through a small window on the long outside wall and through a large south window casting a great beam of light across the room, behind which is revealed a fine fireplace nearly as high as the room. No effect could be more simply obtained, yet it is really dramatic. It is, however, not theatrical, for, naturally, the spotlight of the stage hardly belongs in the home.

All these considerations of lighting influence color design in interiors. This is a chapter in itself and its importance need only be mentioned to be realized. Light is the source of color. The effect of light on color, through emphasizing it, harmonizing it and modifying it, is really the whole secret of color in art. Color is really designed by means of light. Designers follow this principle when they work out the color schemes of rooms "on the job" itself—mixing colors of surfaces and trying them on the walls and ceilings of the rooms they are to decorate and testing samples of hangings against them. If one could try the experiment of changing the amount and quality of light in some of the most beautiful interiors by changing the design of openings in the walls, he might witness a great change in the value of the color and decorations. Some designs would lose emphasis and interest in a subdued light or if the light were closed off in a certain direction; while other



STAIRCASE WALL OF BOOK ROOM—RESIDENCE OF FRANCIS V. LLOYD, ESQ.,
EDGEMONT, PA.



DINING END OF LIVING AND DINING ROOM—RESIDENCE OF FRANCIS V. LLOYD, ESQ.,
EDGEMONT, PA.
Mellor & Meigs, Architects.

designs, in a strong light or with light added from additional sources upon dark surfaces, would be rendered crude.

This principle of lighting and of color in lighting has still another sequel; that is, the problem of how many sides of a rectangular room should have windows. Dr. Denman W. Ross once pointed this out to me, as he pointed out many another truth in design. In his remarkable researches into the mysteries of color and painting, he experimented for years in portrait studies, painting models seated in his studio, which is a large room, in different effects of daylight, of "hot" or "cold" light, of light coming from different sources. As a result of this long experimenting he came to these interesting conclusions about the placing of windows in a room: Too much cross-lighting is to be avoided, hence light from windows on three sides of a room may be undesirable; also, a fireplace in a wall with windows each side of it causes confusion of lighting and a diffusion of interest. I have never accepted this precept without reservation; but I have seen many a room which would have been the better for following it.

Incidentally, windows have another relation to interior design. Just as in the case of exteriors, they should be contrasted with wall spaces; they should not cut up the design; there should not be too much variety of size and shape and of pattern of window panes. If small panes are desirable in the exterior of a small house, they are particularly needed when seen from the inside. In the stock plan, the custom of placing two windows on each side of the centre entrance in each room, where one would usually be better, leaves too little wall space both inside or outside. In some small old houses I have seen rooms, 14 feet square, amply lighted by three windows 4 feet 6 inches by 2 feet 4 inches, two of them in one wall and one in a wall adjacent. The arrangement provided ample cross ventilation, maintained the scale of the rooms, and afforded more space for furniture and decorations. In very small rooms, a single window in a wall, particularly in an end wall, has the virtue of furnish-

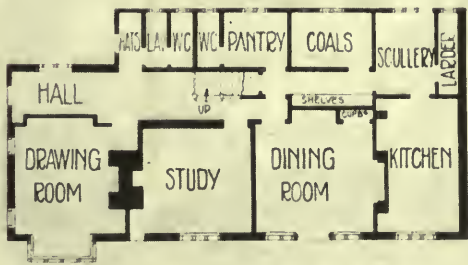
ing but one source of light instead of two, thus making less cross-lighting; also it avoids emphasis of the corners of the room which have less illumination. This concentration of light into one large window motive, of grouped windows, of a "battery" of casements, or in a bay, has the additional merit of making the window an interesting feature of design in itself rather than a mere utilitarian opening in the wall.

One more application of lighting principles should be noted before the reader wearies of the subject. As in other parts of the design, the proportioning and variation of amount of light is apt to be most sound when it has a practical reason behind it to reinforce a purely artistic one. Certain spaces in a home, like the dining space, need more light than others. Even certain parts of a large living room may have stronger sunshine than others, particularly around the fireplace. Lighting helps establish the transition between the most sheltered and secluded parts of a house and the outdoor world; that is, glazed loggias or enclosed porches may have most light of all. Often, however, this principle is exaggerated. One sees an enclosed breakfast porch all glass panes, hardly with any appearance of firmness of walls or points of support, giving the effect of a greenhouse. Likewise, in the relation to the exterior, bay windows or projections such as alcoves may jut out from the interior to take advantage of a landscape view or serve as a transition to the garden; and, as viewed from the exterior, such a bay or large window may appear at the end of a vista through some part of the garden or through the lot.

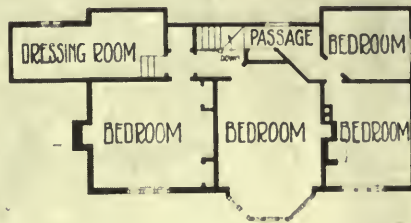
Such proportioning of illumination with regard to the relation to the exterior runs parallel with the design in space relations, as described in previous articles of the series. It also affects the design of the shapes of plan and of section, as noted above. In this connection, porches are important. In the north, porches are useful only during part of the year unless glazed in, in which case they are often better designed to be enclosed at the beginning. In New England and



Photograph by Irving.



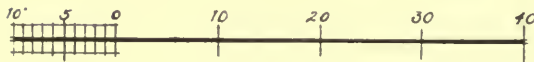
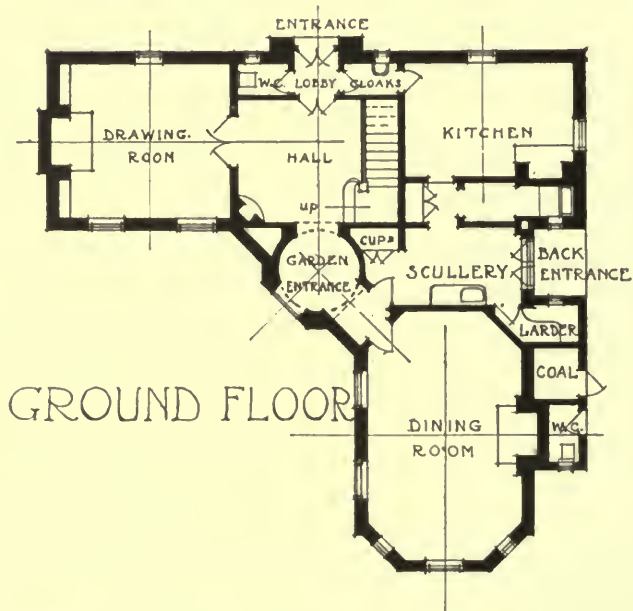
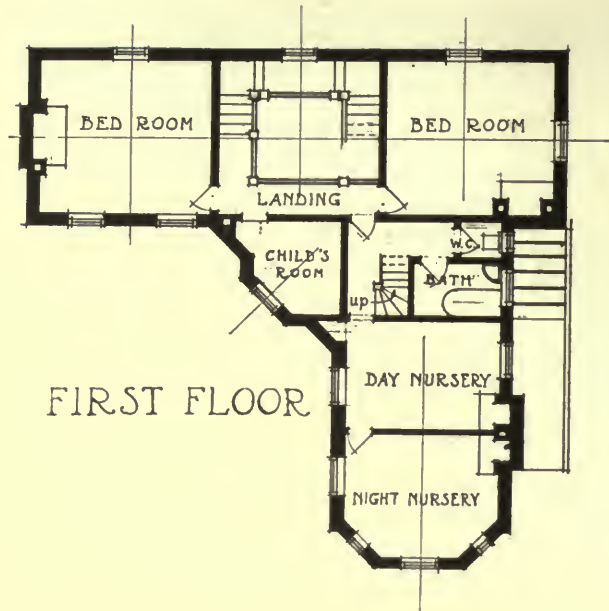
GROUND FLOOR PLAN



FIRST FLOOR PLAN

Reproduced by permission from "Country Cottages," by J. Elder Duncan; John Lane Co., Publishers.

COTTAGE AT SILCHESTER COMMON,
NEAR READING, ENGLAND. MERVYN
E. MACARTNEY, ARCHITECT.



FLOOR PLANS — "RIDGEHANGER,"
 EALING, MIDDLESEX, ENGLAND.
 ROBERT ATKINSON, ARCHITECT.



"RIDGEHANGER," EALING, MIDDLESEX, ENGLAND. ROBERT ATKINSON, ARCHITECT.



ENTRANCE HALL — "RIDGEHANGER,"
EALING, MIDDLESEX, ENGLAND.
ROBERT ATKINSON, ARCHITECT.



VISTA FROM ENTRANCE HALL INTO DINING ROOM—"RIDGEHANGER," EALING, MIDDLESEX, ENGLAND. ROBERT ATKINSON, ARCHITECT.



DRAWING ROOM—"RIDGEHANGER," EALING, MIDDLESEX, ENGLAND. ROBERT ATKINSON, ARCHITECT.

the far north, the porch can be used for only about four months in the year, and in many cases it may be better if it is replaced by a terrace and an awning on uprights that may be unrolled during the heat of the day. Here, too, the effect on the illumination of the interior by the porches is often overlooked.

One further aspect of the art of the interior taken as a whole deserves notice; that is, the linking together of the rooms and spaces. If one studies small house plans, he will often see cases that give evidence that the designer has become confused between two conflicting principles. One principle is the separation of rooms to preserve individuality and privacy; and the other is the throwing of them open in order to gain that effect of ease and spaciousness which is so desirable and is particularly expressive of the tradition of hospitality. Each principle is valuable, according to circumstances, and both may be used in the same house. The fault to avoid is that of trying to use both at the same point. This makes a plan loose, poorly jointed, and robs the interior of character or contrast. It may be well to remember that spaciousness and hospitality have been valued in the past, and have been obtained without sacrificing the individuality of rooms. Even in the old Italian palaces, planned for lavish entertainment, a room was usually entered through a rather small single door, sometimes through a double door in great rooms. In France, this separation is to be noted, particularly in the smaller rooms, even in the Palace of Versailles. The French doors, divided into two leaves, each leaf with three or four panels, are most successfully used in the principal rooms of the small house. They look very well with one leaf open, and give ample effect of space and ease when both leaves are opened.

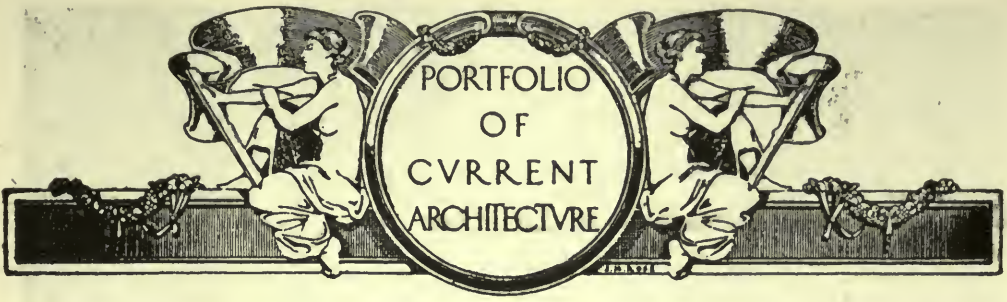
On the other hand, if rooms are

thrown open to one another, they should be boldly joined together with but little wall space dividing them. It is the wide, squarish, sometimes doorless openings that wreck so many small house interiors. These, or else the use of doors all glass, which, added to the glass of too many windows in the other walls, do irreparable damage to the walls of any room, plastered as it thus becomes with panes of glass on every side, usually too big. This always seemed to me one of the curious minor faults of contemporary house design; yet I do not know of a designer who was not in some respects addicted to this device. The early American interiors were always beautifully co-ordinated in the design of openings. The right sort of opening was usually chosen for each case, and it is always beautifully proportioned and shaped, in harmony with the other forms of the rooms. In old houses one sees hardly any of those impossible fat, rectangular openings combined with delicate Renaissance proportions of other surrounding elements, such as are found to-day. This is a common fault of design and extends even to elevations and to gardens. Where double doors are used, an opening 4 feet wide is usually wide enough and 3 feet 10 inches may be better.

All these elements of the design of the interior as a whole can hardly be successful unless framed in one consistent scheme. The scheme should express singleness of purpose. The whole expression should be formal or informal, though a certain judicious combination of the two schools is possible. If flexibility is sought, it should not be loose or careless, or capricious. It should be firm and it should be sound. It is apt to be better if it is direct and simple. This is the field of interpretation and expression and is the peculiar province of the personality of the artist.



J. S. BACHE MAUSOLEUM, WOODLAWN, N. Y.
DAVIS, McGRATH & KIESSLING, ARCHITECTS



PORTFOLIO
OF
CURRENT
ARCHITECTURE



J. S. BACHE MAUSOLEUM, WOODLAWN, N. Y.
DAVIS, McGRATH & KIESSLING, ARCHITECTS



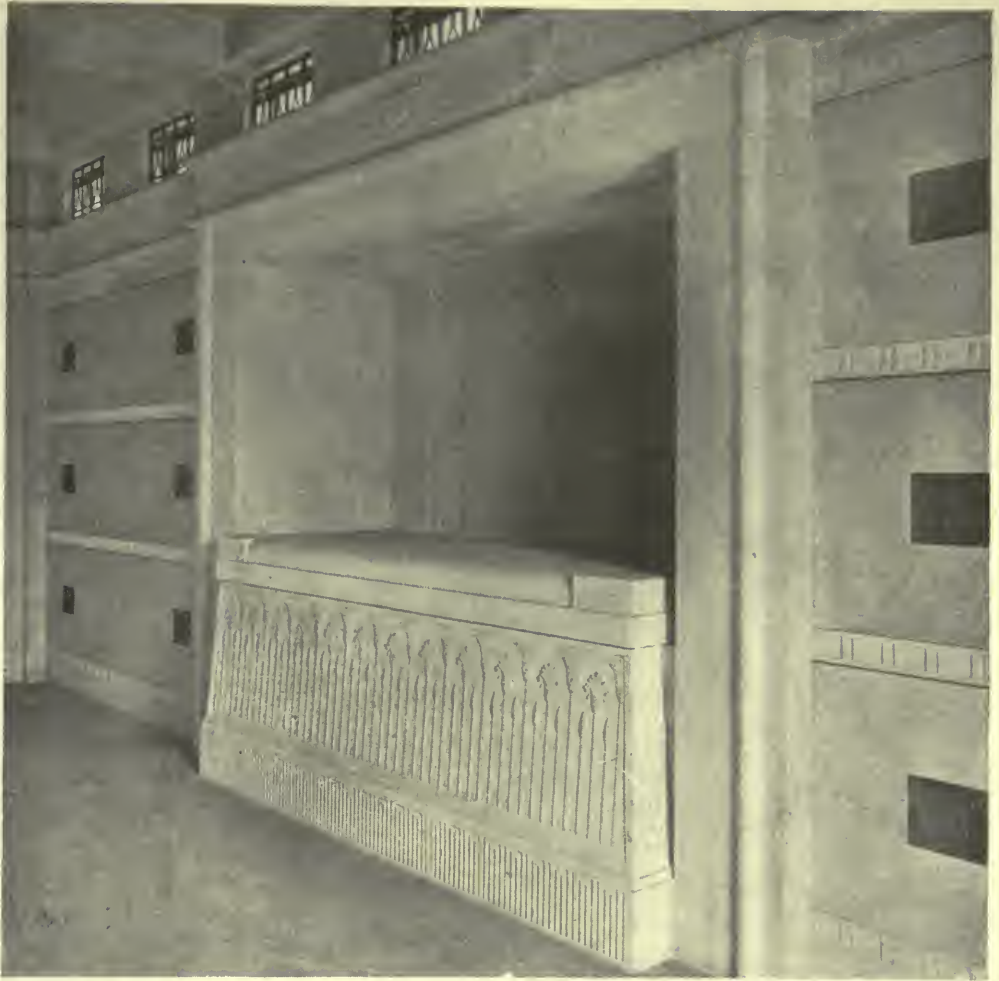
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STAIRCASE, SHOWING FRIEZE—ROYAL COLLEGE
OF SURGEONS. SIR CHARLES BARRY, ARCHITECT.

English Architectural Decoration

Text and Measured Drawings
by Albert E. Bullock

Part XIV-2. Staircases (Continued).

THE eighteenth century in architecture and decoration opened with a burst of literary activity, which was largely retrospective when the classical revival may be said to have definitely developed with a far-reaching effect.

During the first decade Sturt published a translation of Pozzo's "Principles of Perspective," the proofs being read by three eminent architects, Sir Christopher Wren, Sir John Vanburgh and Nicholas Hawksmoor. Volumes upon allied subjects were produced by James Gibbs, Colin Campbell, William Kent and many another well known architect. These books consisted of drawings giving accurate dimensions and measurements of examples of the best buildings of their predecessors, indicating that research in architectural matters was sought after; while several designs for current work were frequently included. The chief source of their efforts comprised many of the more important buildings erected by Inigo Jones—Colin Campbell including in his three large folio volumes, "Vitruvius Britannicus," the two designs for the Palace at Whitehall, the Queen's House at Greenwich, Wilton House and many other later works.

Towards the middle of the century the number of firms of cabinet makers and joiners increased until Sheraton—who was famous for his seaweed marqueterie—published in 1793, with the assistance of Adam Black, his "Cabinet Makers' and Upholsterers' Drawing Book," to which was added a list of over 450 of the principal cabinet makers, etc., of his day. Chippendale's "Director" had hitherto held sway as a standard work of reference in furniture; while John Grunden, Ince and Mayhew

and a few others produced books of varying merit.

The close of the previous century had witnessed a purely naturalistic tendency in the carvings for decoration. Hugh May, the friend of Evelyn, is associated with the early portion of Cassiobury Park, Herts., which contains much carving of the Grinling Gibbons school in this famous house of the Earl of Essex. The staircase at Sydenham House is of Charles I period, having pierced balusters carved with Ionic capitals; while at Westwood, Worcestershire, the staircase newels are carried above the level of the handrail with lofty Corinthian columns, each terminated with a ball finial.

At Rushbrooke Hall, Suffolk, the staircase is also of the time of Charles I, having turned balusters, closed strings and panelled newels. The balusters at Norton Conyers are of Italian type, similar to Burton Agness in Yorkshire, only that the latter example contains more members in the moldings.

At Gifford's Hall the balusters are twisted similar to the example given from Forbes House, Gloucester. At Wakehurst Place two types of baluster are used, one being twisted and the next plain in alternation.

The type adopted by Inigo Jones at Ashburnham House occurs with slight variation at "The Vyne," Basingstoke, Hants., with its Palladian entrance hall by John Webb, and also at Coleshill in Berkshire.

Panelled risers occur in the elaborately carved Charles I work at Dunster Castle, Somerset, of which the balustrade is pierced and carved after the manner of the work quoted from No. 25 High Street, Guildford, and a house in the Close at Winchester. Another in-

stance of panelled risers is to be seen at Ladybellegate House, Gloucester, where the balusters are twisted, the newel being formed of a group of four balusters clustered together upon a carved acanthus bulb-shaped base. The carving to the top landing frieze appears to be somewhat later than other details of the house and is obviously applied. Although the general features are of late Charles I period, the front room ceiling has the character of the work of the time of James Gibbs.

Carved balusters of massive type exist at Cobham Hall, Kent, which are richly treated with Ionic capitals and acanthus leaved bases. The twisted baluster was introduced before the close of the reign of Charles I, as is evidenced by the work at Dawtrey Mansion, Petworth, which is dated 1652 upon one of the newel terminals. The finials or drops in this instance are pierced, giving an interesting effect of lightness to an otherwise heavily molded feature.

In some cases the newel was carried up above the level of the balustrading as a column to support the landing above,

often being treated in similar character to the baluster, as occurs at St. Georges, Canterbury, where the twisted form of the baluster is repeated in a slightly thicker form. This example is illustrated in Mr. W. H. Godfrey's book upon "The English Staircase," where also may be seen a photograph of a unique circular stairway with twisted balusters from The Friars, Aylesford.

Before the treatment of ramping the handrail became common practice, the projection of the first stair to a flight appears to have created some difficulty, which was met in certain instances by a carved scroll projecting from and attached to the base of the newel. The main staircase at Cobham Hall is a good solution of this problem.

With the introduction of the cut string, the nosing moldings were returned around the end of the stair, which offered an opportunity to carve brackets at the stairs ends for enrichments. An early instance of this exists at Messrs. Bruton & Knowles's premises at King Street, Gloucester, and No. 51 Conduit Street, London.



STAIRCASE—UNLAWATER, NEWNHAM-ON-SEVERN, GLOUCESTERSHIRE.



STAIRCASE—BEACON HOUSE,
PAINSWICK, GLOUCESTERSHIRE.

It is possible that staircases having molded soffits of the type at the Victoria Hotel, Newnham and Unlawater in the same Severn Valley village are of early origin within the period, the idea of panelling the spandril being adopted later to avoid the expense of this alternative. Soffit panelling was sometimes resorted to in lieu of the usual plaster, plain or enriched.

Later examples include Saltram at Plympton in Devon, which has three balusters to a tread, two of which are twisted and the center one fluted; while the staircase at Beacon House, Painswick, previously referred to, is similarly treated to the latter and to a staircase at the Conservative Club in Gloucester, formerly belonging to a wealthy tanner of that city. Bearland House, Gloucester, now occupied as the telephone exchange, is one of the finest examples of the time. The care with which the stairs at the landing level are shaped to the bend of the well and the double turned stairs at the foot, known technically as the "curtail," as shown on the accompanying plan, indicate a high grade of craftsmanship, not to speak of the carved archway in the hall or the adjoining panelled room, which latter has, however, suffered some vicissitudes of fortune since its origin.

At North Pallant House, Chichester, the newel differs from the baluster in being formed of a small fluted Corinthian column with similar pilaster upon the dado to correspond. The stair ends have a carved panel and adjacent carved bracket under each second stair. The combination of spiral carving or twist with the molded base reflects two previous periods. The simple turn of the handrail over the abacus of the column is noticeable, also the character of the ornament introducing the continuous head indicating George III period.

Among the exceptions may be mentioned the staircase at No. 5 John Street, Bedford Row, London, which is a type of work practiced by John Grunden, an exponent of lath work and a contemporary with Thomas Chippendale. The style is of Chinese origin and continued late into the following reign. A simi-

lar treatment from Beacon House, Painswick, has already been illustrated, and a simpler type exists at Flaxley Abbey, the rooms of which house were designed by J. Leck, after the fire there of 1777, in the Adam manner. Little seems to be known of this architect except that he flourished in 1783 and left the designs for the alterations to this house. The present owner, Sir Francis Crawley-Boevey, has taken a great interest in its historical associations and kept a record of the alterations effected from time to time by his ancestors. I shall hope to deal with the reception rooms from that house in a detailed way when treating of the Adam school in a subsequent article. Several of the examples cited in this and the last number have already been illustrated by photographs, such as "The Pynes," Devon, and the wrought iron staircase of Pembroke House.

Staircases of cast iron and stone were not uncommon in the Adam period, such an instance existing at Eastgate House, Gloucester. The idea of molded soffits to timber built staircases was doubtless obtained from stone examples, such as the staircases at Chatsworth, St. Paul's Cathedral and Hampton Court Palace.

Lady Paget's house at Newnham is a good type of domestic stair with considerable play in the effective treatment of the half landing steps, which are supported in lieu of solid filling by tiny balusters. In addition, the ends of the stairs are finished with a flush inlay carrying down the line of the baluster; the carved brackets coming under the second stair in each case.

The inlaid staircase at Claydon House, Bucks, is a very elaborate work of mid-Adam period, with inlaid veneered treads and risers and wrought iron balustrading.

Much elaboration was displayed in some of the Scottish staircases, of which the square turned and carved work at Hopetoun House is typical.

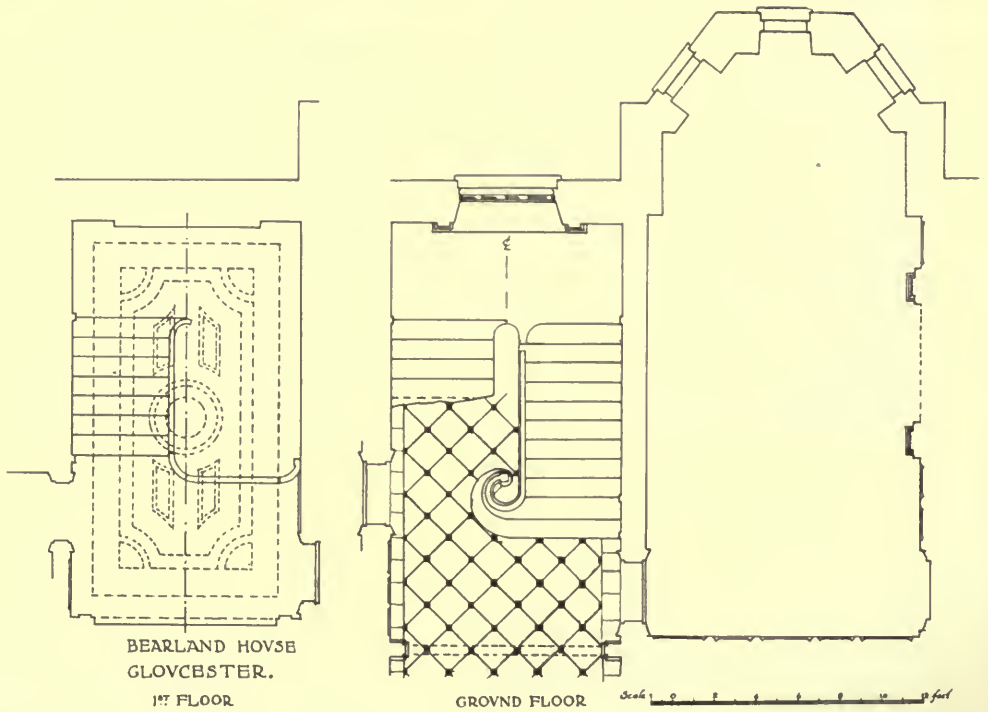
Late George IV work is notable for the importance given to the entrance hall. Henry Holland's scheme at Dover House, Whitehall (now the Scottish office)—in which he was doubtless assisted by his assistant (Sir) John Soane



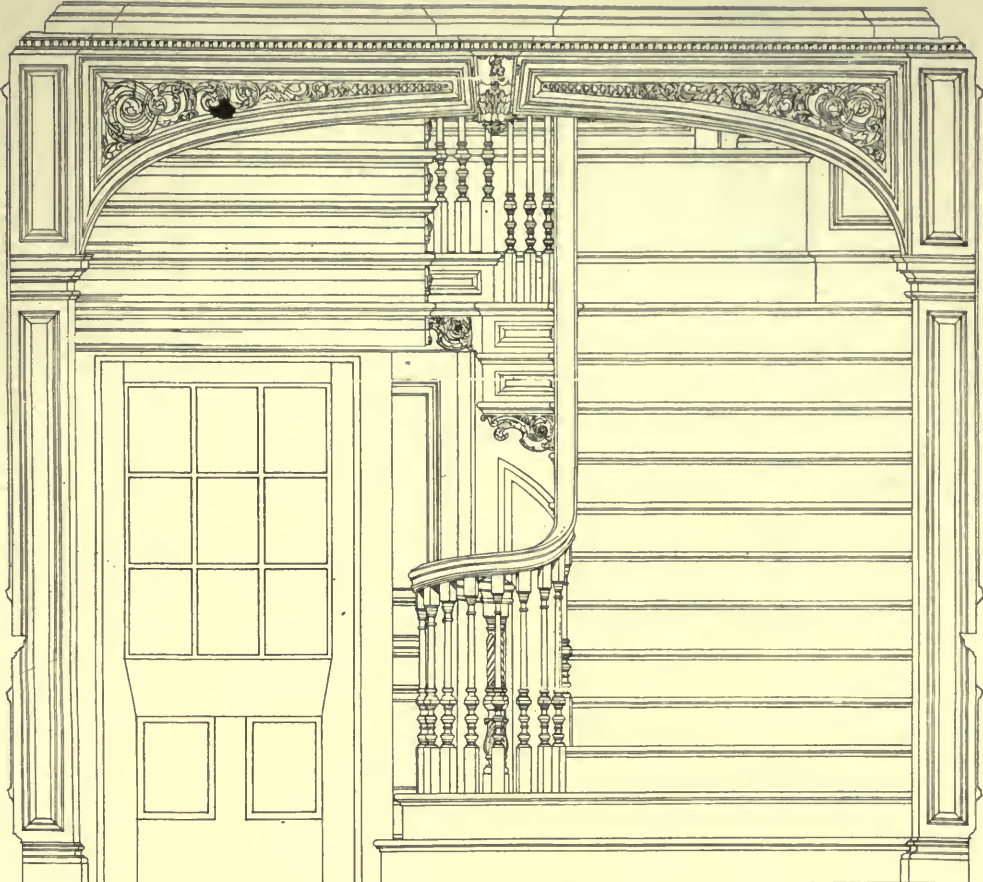
HALL AND STAIR-
CASE—CIRENSTER HOUSE,
GLOUCESTERSHIRE.



THE HALL, BEARLAND HOUSE, GLOUCESTER.



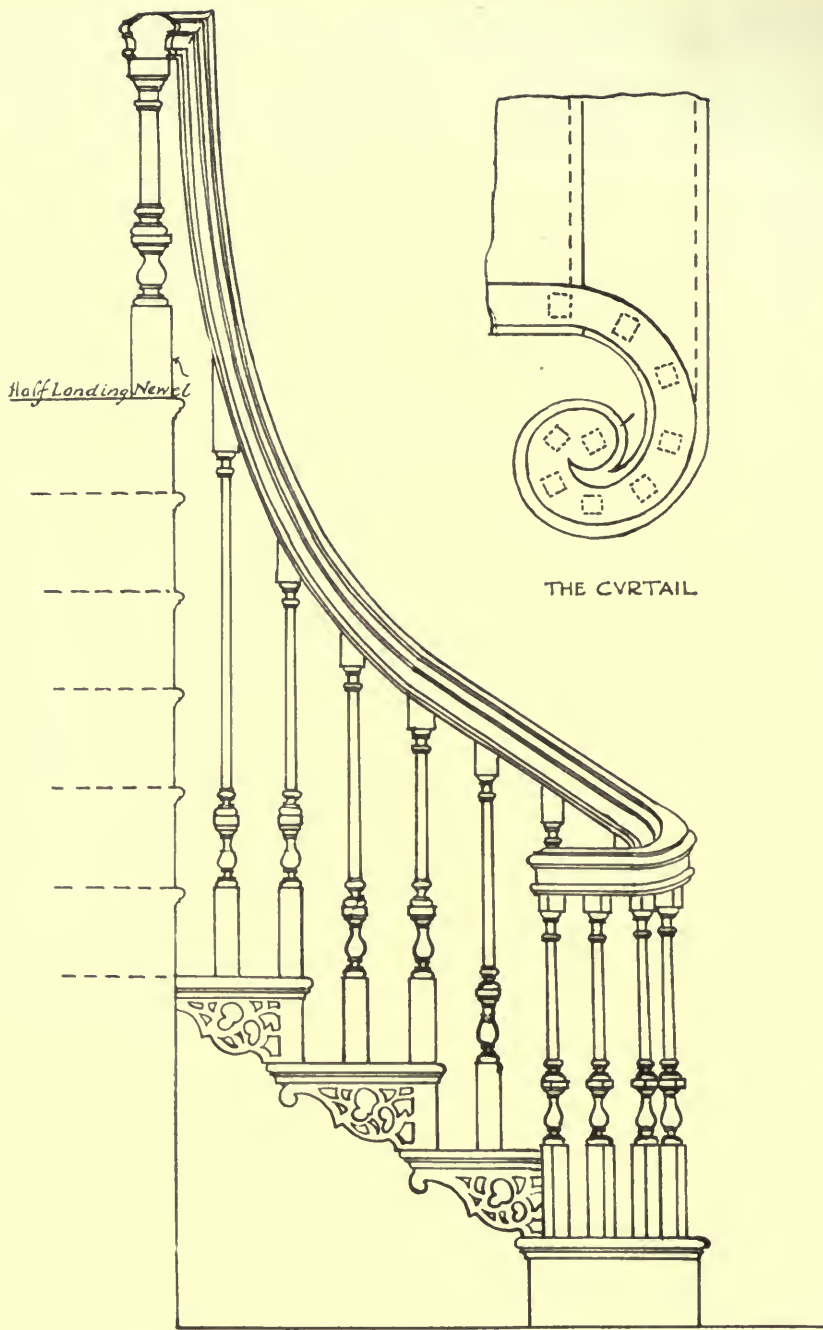
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Scale 1/2" = 6' 0" 1' 2' 3' 4' feet

BEARLAND HOUSE, GLOUCESTER.

BEARLAND HOUSE,
GLOUCESTER.

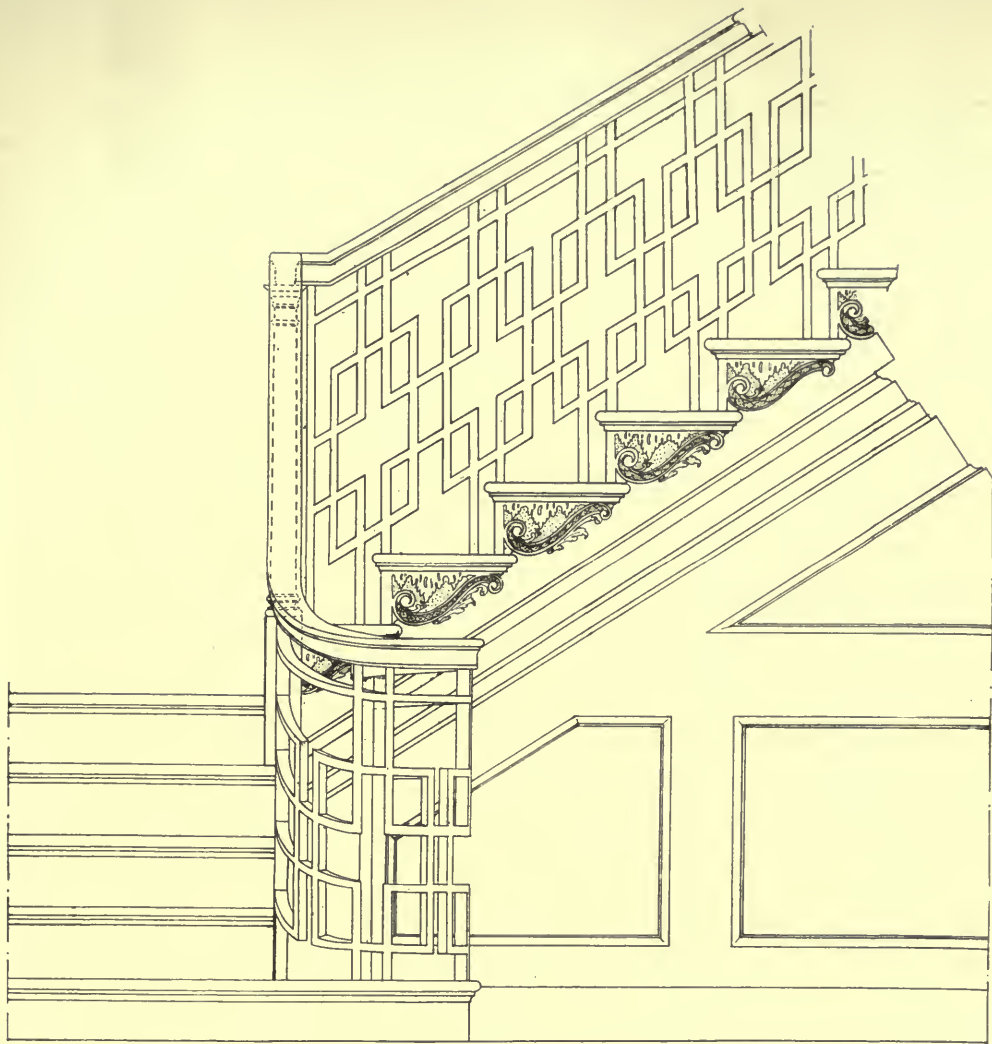


Half Landing Newel

THE CVRTAIL

Scale 12" 6" 0 1 2 3 feet.

MESSRS BRYTON & KNOWLES,
KING STREET : GLOUCESTER.



№ 5, JOHN STREET, BEDFORD ROW.

NO. 5 JOHN STREET,
BEDFORD ROW, LONDON

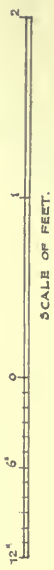
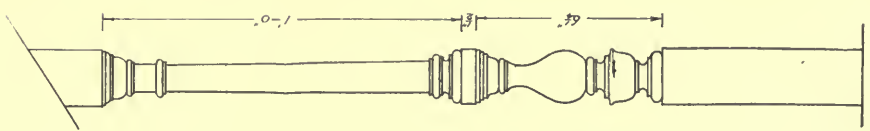
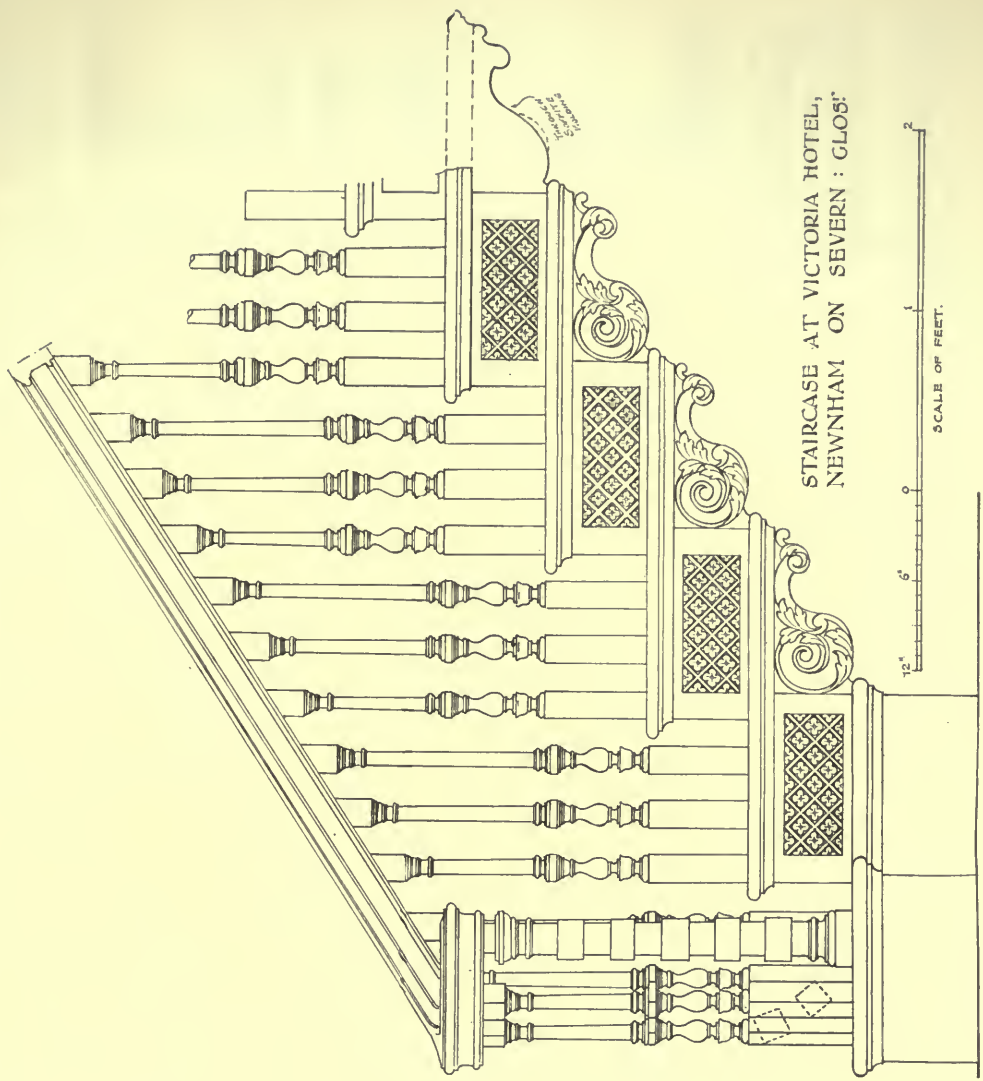


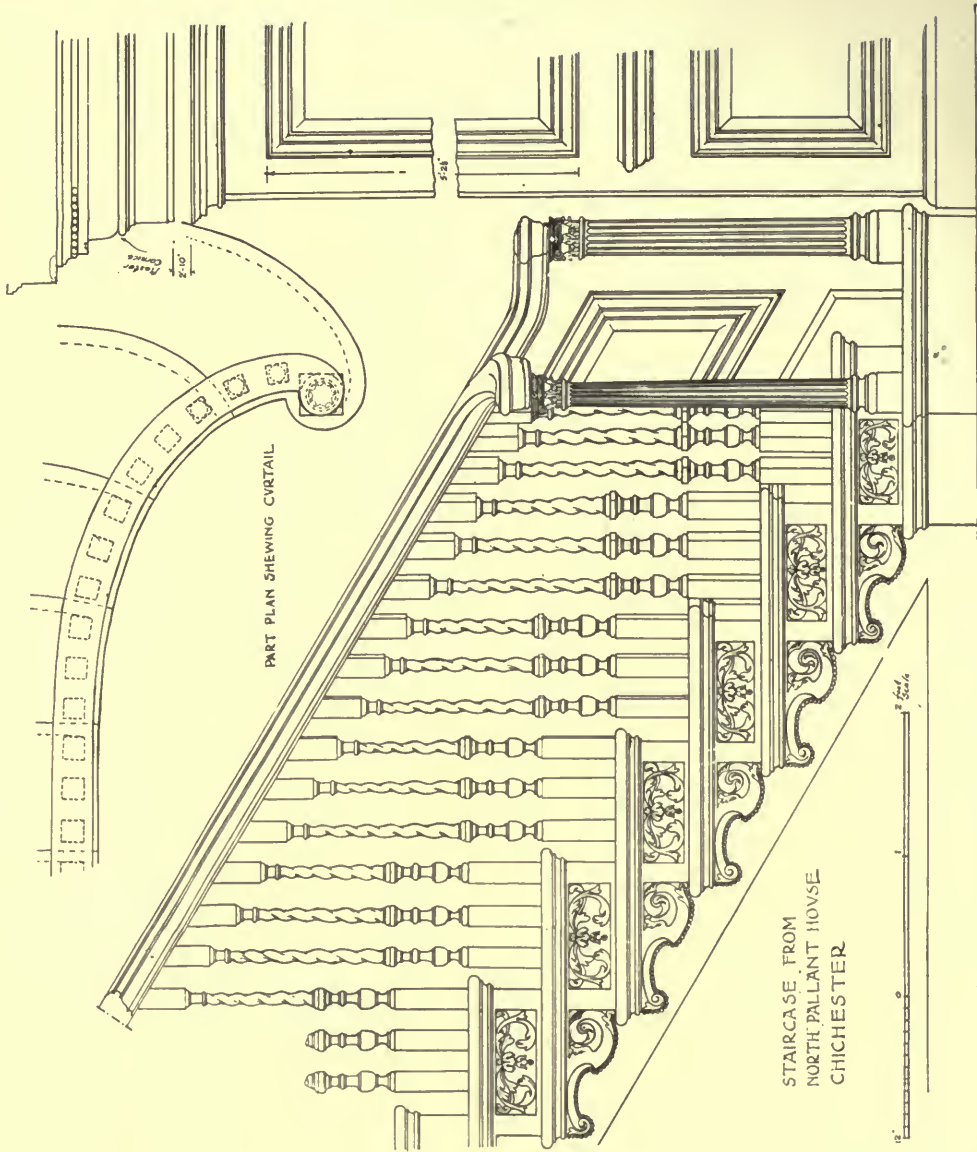
BRACKET TO STAIRS
BEACON HOUSE,
PAINSWICK . GLOS^{rs}

SCALE OF INCHES.

STAIR BRACKET—BEACON HOUSE,
PAINSWICK, GLOUCESTERSHIRE.

STAIRCASE AT VICTORIA HOTEL,
NEWHAM ON SEVERN : GLOS.





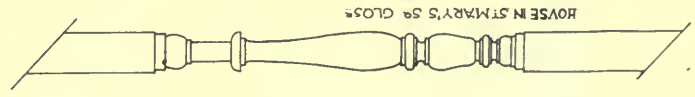
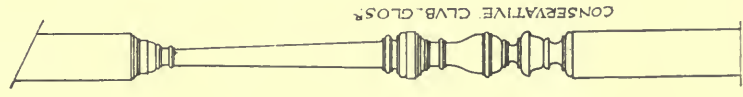
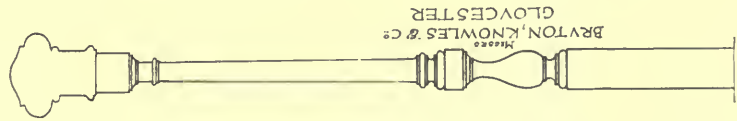
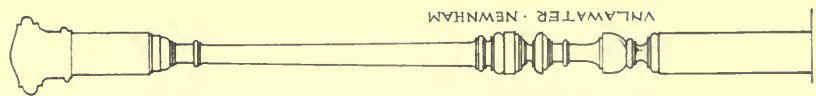
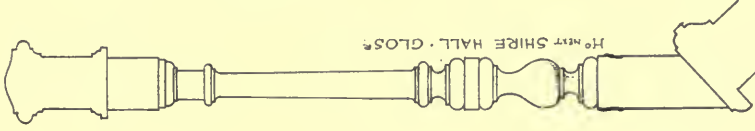
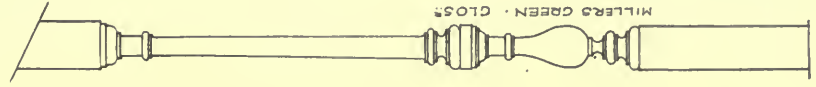
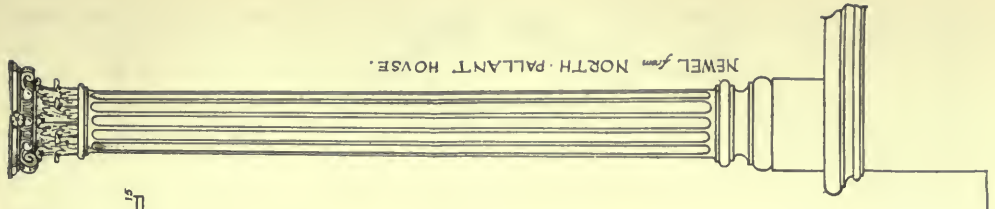
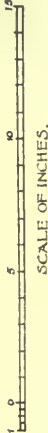
STAIRCASE FROM
NORTH PALLANT HOUSE
CHICHESTER

Scale
0 1 2 3 4 5 6 7 8 9 10

PART PLAN SHOWING CURTAIL

2' 0"
2' 2"
Rafter
Growth

DETAILS OF NEWELS,
BALUSTERS - &c.

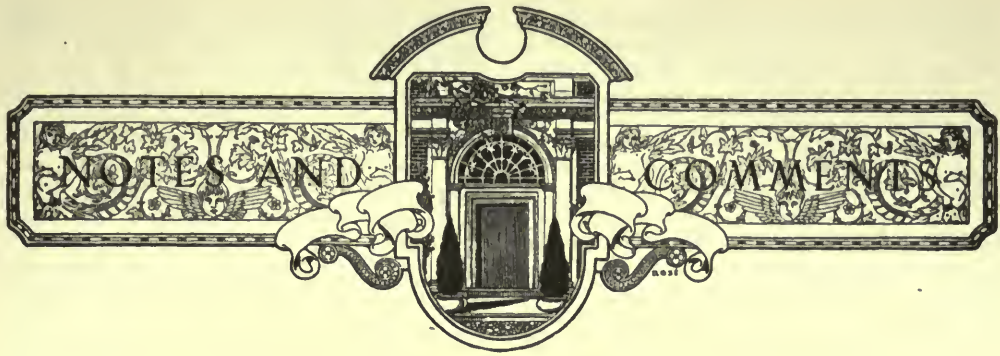


—consists of a circular court, with domed light over, supported upon iron columns with a porte-cochère without and main central flight within giving access to the principal apartment. The Insurance Office at Exeter, executed about 1837, has a variation of the same conception; while Sir Charles Barry at Bridgewater House, the Surgeons College in Lincoln's Inn Fields and in his Club Houses in Pall Mall introduced in addition to the hall a central lounge

or winter garden with large ornamental glazed light over. The planning seems to be an adoption of the Italian cortile, by covering the latter from the weather and thus bringing it within the habitable portion of the house. Barry rarely made a great feature of the staircase itself, relegating it to a secondary place in the plan; from which time it is noticeable that staircases in large buildings were frequently constructed of marble.



UPPER LANDING—LADYBELLEGATE HOUSE, GLOUCESTER.



**Saxon
Architectural
Styles.**

Scarcely a century has passed since Rickman began the first adequate study of historical architecture in England. His researches enabled him at once to classify almost everything known as an ancient important building into the groups named by him Norman, Early English, Decorated and Perpendicular. Of course there are relics of the Roman time, as at Wroxeter, and even pre-Roman, such as Stonehenge; but he found so little of the Saxon period that his disciple J. H. Parker, in one of his early editions, stated that, except for part of the crypt of Westminster Abbey, built just before the Conquest by Edward the Confessor under immediate Norman influence, the only well authenticated Saxon structure in England was the tower at Earl's Barton in Northamptonshire. Later Parker recognized other buildings as undoubtedly Saxon; but he classed most of these as so like Norman as in most cases not to be worth distinguishing from it.

Rickman and Parker by careful study of archives overthrew so many traditions that it is not strange they came to be regarded as almost infallible. Nevertheless, such occasional study as I have been able to give to this hobby, in the few days which I have been able to steal from other affairs in the course of a dozen trips to England on entirely unrelated business, has convinced me not only that there is much unrecognized Saxon architecture in England, but also that this can be divided into three styles as distinct as Early English, Decorated and Perpendicular.

The first of these is shown by a small group of churches of great irregularity. Of these I have seen but three, namely,

Brixworth in Northamptonshire, St. Martins at St. Albans and the church in Dover Castle. The others are mainly in the extreme North, where I have never had time to go. It is at least twelve years since I have seen any of them, so that I must ask some indulgence.

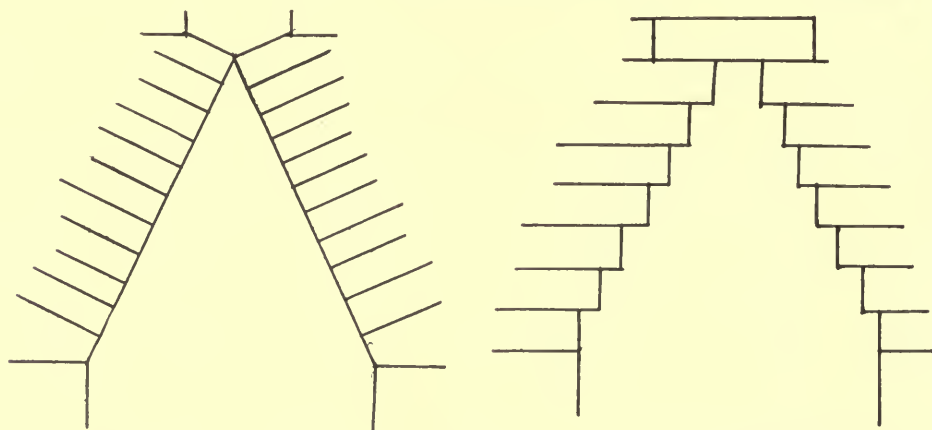
These have often been considered as of the Roman period, and they are built in part of Roman bricks; but I cannot imagine their being either of this period or the period after the Romans departed and before the Saxons came, for the British masons must have kept up in general the Roman practice until disturbed by the Saxon invasion, and the Roman was essentially the child of law and order. Occasionally he departed from strict regularity as in the arch of triumph at St. Rémy in Provence, where one jamb of this most formal building is four inches wider than the other, but the reason of this is plain. It is a late work (date unknown) for which the reliefs were probably stolen, and the frames for them had to be made to match. The mouldings around them are similar, and I had no idea of the discrepancy until by way of testing out my theory that the fundamental unit of a building generally can be deduced from its principal dimensions, I tried a steel tape on it.

But the irregularities of such of these churches as I have seen are wild. St. Martins has three bays on one side of the nave and four on the other. The church in Dover Castle has one wall of the nave a foot longer than the other. I was disturbed in my measurements of this by an officious sergeant, who finally, after his other objections had been answered, stated that this was in a fortress, and that no measurements could be taken without an order from the Commander. I had only the time between trains, so that I had

to give it up, but not until I had convinced myself that the building was based on a unit of eight Roman feet. If I remember aright the chancel arch had this span and twice this length, while the nave was sixteen Roman feet wide and sixty-four long. The individual discrepancies were large, but they averaged up well. I believe this to be a seventh century building erected from the wrecks of former Roman structures by men engaged on their first venture in important masonry and trying to follow the description of a Roman church.

At Brixworth I had only a foot rule

shown in the adjoining sketch. The tangential angles were very sharp at the top, being generally less than 60 degrees, but sometimes the stones were merely laid perpendicular to the lines of the opening, with a cap at the top. A tower at Much Wenlock Abbey in Shropshire shows this style. There is a record that Leofric, the husband of the Lady Godiva, did some building at this place, but I am inclined to assign this to a century before his time. Perhaps he built the nave of the church of which the roof joint still shows on the tower wall. This had the sharp pitch



THE ANGLO-SAXON STYLE IS CHARACTERIZED BY OPENINGS COVERED WITH OVERLAPPING STONES LAID HORIZONTALLY.

and the back of an envelope for my measurements. Here again no two piers or spans agreed; but again it looked like a reminiscence of the Roman foot, though the correspondence did not seem so well defined as at Dover. The irregularity was so great that it seemed impossible to accuse of it a skilled builder in any style.

The Britons must have had what churches they needed in the Roman time, and it is difficult to conceive of their beginning to build stone churches, if before they only had wooden ones, in the terrible time of panic which marked the coming of the heathen. There is one stone church in England now recognized as of the Roman period. It is quite different from these, though I believe that all have round arches. I cannot imagine how such different arch centers came to be built as those at St. Albans.

The second Saxon style is characterized by openings covered, not by arches but by overlapping stones laid horizontal, as is

which seems to have characterized most Saxon churches, even of the latest date.

The straight sided, sharp pitched openings in Saxon architecture, instead of having either overlapping stones to cover them or stones laid at right angles to the pitch, sometimes had a single bar of stone extending over the full length of the sloping side, so that two such stones meeting at the top closed the opening just as two wooden beams would have done. These stones also in many cases corresponded with what is known as long and short work in Saxon architecture, namely, upright bars of stone of the same kind which made the ornamentation of the corners, whereas the intermediate spaces were filled in with rubble. Occasionally one of these bars was laid horizontal extending well out into the rubble. The stones thus laid bore a very strong resemblance to the wooden constructions known as half-timbered work today in England, and is, I believe, a reminiscence of the time when

Saxon huts were mainly built in this half-timbered style, with the openings filled with clay and wattle instead of with brick work, as in present day construction.

There are in Colchester quite a number of windows of this type in ancient houses, and if I remember these are mainly of Roman brick, which abounded there. Possibly some of these may have been built later, as cheap substitutes for arches. The Saxon Chronicle records that Eadward the Elder, son of Alfred the Great, rebuilt this town in 921.

My copy of the Saxon Chronicle, published before the day of Rickman and Parker, has a lot of cuts of Saxon coins. Among those ascribed to Eadward the Elder (901-925), several show the apses of stone churches, and the Chronicle itself tells how under this Eadward was built the new minster at Winchester and the towns of Chester, Witham, Bedford, etc. were rebuilt. Doubtless this included rebuilding churches. Most of these I believe to have been in the general style of Western Europe, known as Byzantine. This would agree with the representations on the coins; and also on the jamb of the door of the unquestioned Saxon tower of Earl's Barton there is a low relief, nearly gone, but still unmistakable, representing an arcade of round arches with (if I can trust my memory for twenty years) fillets around the shafts supporting the arches. I believe Eadward the Elder to have introduced this style into England in rebuilding churches in the region from which his father had finally driven out the Danes. These heathen hung on for a long time in East Anglia, and the hold of the sons of Alfred was somewhat precarious, so that probably the new style, involving high technical skill, was slow to spread and lapped over for a long time on the older, especially in the wild Norman's land of the Welsh marches, so that possibly the Much Wenlock Tower may be Leofric's work in spite of his following a century after Eadward the Elder, although there are in that neighborhood a number of churches in the more finished later Saxon style. One of these, at Stotesden, has a feature which I have never seen in any other building. This is some beautiful low relief carving on the under surfaces of the square caps between the tops of the shafts and the springing of the arches. Otherwise this sufficiently resembles Norman, so that Parker can be excused for classing it as such if he ever

saw it. In several other churches which I think surely Saxon there is remarkable carving; and I am inclined to think (in which I am not alone) that it was extraordinary if in the troubled reigns of the two Williams, of Henry the First, Stephen and Matilda and Henry the Second the immense amount of, so called, Norman architecture could have been erected, which is commonly credited to them, and especially by masons without previous experience; while it would not be at all exceptional to have any man who added to a building speak of the whole as his work.

I have found specific reference of earlier date than Rickman in one or two cases to churches as having been built by the Saxons, for instance, St. Johns at Chester, though probably in this case only the foundations are so early. On the other hand in Chester Cathedral there is one arch of an arcade, otherwise considered Norman, which is there represented as Saxon because of an interlacing pattern on the jambs. This I think is a mistake, for I remember seeing forty years ago a very similar pattern in Norman work at Monreale in Sicily, where the Saxons never were. On the other hand in Church Stretton is a doorway of which I believe the east jamb to be Saxon and the west Norman. The moulding is different. The break comes near the top of the arch and a piece of that on the east jamb is built into the wall above. Apparently the west end of the church had been destroyed and rebuilt in the Norman style. The earlier part may have been Norman also; but I believe it to have been late Saxon, as there are a number of late Saxon churches in the neighborhood, and the name is Saxon.

N. T. BACON.

**Is Architecture
a Simultaneous
Art?**

Somewhere, in a school of fine arts, one reads on the door of the studios for life drawing and modeling the words "Simultaneous Arts." What these words mean every one knows. I need only call attention to them in contradistinction to the "successive arts," which include literature, music, dancing, etc. While the latter unfold their creations by degrees, the former are supposed to show theirs at a glance.

It seems right to say that when an object is presented to your eye you see its

whole at once, especially if the object is of a small size. But a little consideration will prove this statement to be only partly true. To see even a minute object, say, a small ring, the eye must travel from one point to the next if it is to focus equally on all parts. How much more this holds good when the object of our inspection happens to be such a work as St. Peter's or the Parthenon, in which the most we can gather from the first general impression is just an idea of the silhouette.

There is as much successive perception involved in the examining of works of architecture or sculpture as in the examination of any of the works of the "successive" arts. Those particularly interested in the subject will find the book on Rodin by Gsell extremely interesting. The master helps us to enjoy not only the masterpieces of his own art, but of painting as well. In speaking of a famous painting, "Le voyage a Lutece," he explains how the artist succeeded in suggesting motion by having the various attitudes of a movement performed by different groups of figures. Thus, in this picture, the foreground figures are hardly determined to rise, while the very last in the perspective are rushing for the boat. How could such a reading of a picture take place, but for the successive work done by the intelligent eye. The same master, explaining the meaning of "The Bronze Age," one of his own creations, says this conception represents the awakening of man to a higher knowledge. In it the master endeavored to suggest the very idea of awakening. "The feet and legs are still slumbering." It takes Rodin's power of observation to detect such a delicate thing as the slumbering of a leg. Probably the most backward Indian is in this respect far more advanced than his civilized brother, for people living in a primitive way are trained by observation to judge the mental and physical states from the mere motion of a single muscle in the body. "As the eye rises on this figure the forms begin to assume more definiteness, becomes sharper and suggestive of life, until on reaching the head we see the young man taking hold of his hair as if endeavoring to shake himself and throw off the last vestiges of sleep." It is needless to dwell on the necessity of the successive steps required to discover all these qualities in a masterpiece.

Turning to architectural conceptions, let us ask: What are the various phases to be considered in the examining of, for in-

stance, a small inspection pavilion in a park? We have seen that our art partakes of the successive and the simultaneous, according to the distance of the observer from the work in view. Let us, then, stand at a respectable distance from our little pavilion, especially on a misty day. Hardly anything will be seen but a clear silhouette detaching itself against the sky or wood. This silhouette is enough to take hold of us, if the structure was designed with this particular consideration in view. Should it prove well done, it would invite closer inspection. We slowly approach till we detect masses of lights and shades. Though we may not perceive a single detail, if the work is successfully carried out, we shall be impressed by the harmonious distribution of these masses and their rhythm. The interest is increasing and as we approach closer we begin to distinguish details, to the examining of which we apply the same process of "thorough seeing" as we did in noting the distribution of the masses. Our progressive advance will finally take us so close to our object as to focus the very texture of the material forming the background of the ornaments. Thus we have seen the gradual unfolding of the qualities of the artist's conception: beauty in features big and small, and beauty in their relationship.

A great work of architecture must present the same qualities as the life of a great man. The latter must appeal to the historian through the hazy perspective of centuries, when nothing but general facts are perceived indicative of power or inspiration; likewise any structure of merit, be it ever so small, should present to the eye more than a mere display of details. It is the artistic arrangement of materials and details that gives the whole conception all its merit—that keeps the eye constantly interested from the moment it discovered it in the distance till one could almost touch it.

The foregoing contains a hint as to the real method of studying design. We have to satisfy the various stations of the on-looker, even the most remote. Here is where the study begins. We start with our silhouette, the prelude of our composition as it were; then gradually we pass on to the study of the main proportions of the masses and their relationships, until we reach the study of details, the nature of which must be related to the desired effects from the distance.

DAVID J. VARON.