THE ARCHITECTVRAL RECORD CONTENTS	
Vol. XLIII. No. 2. FEBRUARY, 1918 SERIAL NO.	0. 233
Editor: MICHAEL A. MIKKELSEN Contributing Editor: HERBERT CROLY Business Manager: J. A. OAKLEY	
COVER—Temple of Concord, Girgenti. Water Color by Otto R. Eggers THE RESIDENCE OF CHARLES D. BLANEY, ESQ., Saratoga, Cal.; Willis Polk & Co, Architects By MacDonald W. Scott THE ART OF THE MIDDLE AGES—Part I By Arthur Kingsley Porter THE DESTRUCTION OF HISTORIC BUILDINGS AS REVEALED BY THE OFFICIAL FRENCH WAR PHOTOGRAPHS—Part III. Parish Churches	РАGE 99 115 131
By Thomas E. Tallmadge THE MEMORIAL QUADRANGLE OF YALE COLLEGE: James Gamble Rogers, Architect	149
ENGLISH ARCHITECTURAL DECORATION—Part IV. Text and Measured Drawings	161 176
By Creighton Barker Community Courts for Factory Workers	180
Image: The Architect's Library: War Books of the Cathedrals—Part II. Verdun—By Barr Ferree Notes and Comments	186 189
early Subscription—United States \$3.00—Forcian \$4.00—Single copies 35 cents. En lay 22, 1902, as Second Class Matter, at New York, N.Y. Member Audit Bureau of Circul	ntered lation.
PUBLISHED MONTHLY BY THE ARCHITECTURAL RECORD COMPANIEST FORTIETH STREET, NEW YORK	NY



Photographs by Francis Bruguiere.

PORCH AT MAIN ENTRANCE FROM THE WEST GAR-DEN-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARATOGA, CAL. WILLIS POLK & CO., ARCHITECTS.

ARCHITECTVRAL RECORD

VOLVME XLIII



NVMBER II

FEBRVARY, 1918

Che RESIDENCE OF CHARLES D. BLANEY, Esq. SARATOGA, CALIFORNIA WILLIS POLK & Cº-ARCHITECTS By Mac Donald W. Scott

UNLESS architecture corresponds with natural environment one of its fundamentals is violated. To incorporate the spirit of natural surroundings in his work, the architect, no less than the artist or the poet, must breathe inspiration from environment.

These truths explain why every attempt to introduce Colonial architecture into California has met with failure. They explain why the Mission, characteristic of the Southwest and of California, is in a false position when attempted where deciduous trees flourish and where the grass is green in the spring, summer and autumn. Spanish and Italian influences continue to predominate in the best of California houses. It is true that there are some notable examples of French and English architecture in California, but they are and always will remain sadly out of place.

The architect and the artist can build only on the foundation which nature has laid. So it happens that on the San Francisco peninsula and in the delightfully diversified district which reaches a hundred miles or more southward from the city, there are coming into being country homes that, with few exceptions, reflect Italian or Spanish influences, with here and there modifications to suit the peculiarities of the site and to meet an ideal expression of the architect. The district, owing to its rolling, hilly or mountainous character, demands careful study if originality is to be achieved.

Climatic influences play their part in determining the elements and the aims sought. Thomas Hill, a famous California artist, years ago said that no one should dream of a new home in California except in September or October. In these months the State is at its best. The warmest days of the year have passed. The whole country is a symphony in brown. The atmosphere, hazeladen, carries that almost imperceptible droning quality which only those who have been on the desert can ever know or love. Tradition, fitness, both protest against the intrusion of the architecture of any water-laden land. It is a country of dreams, of rest, of peace ineffable It is like Italy; it is like Spain; more than anything else, it is like itself, possessing its own peculiar charm and quality and individuality.

In such environment, and always with the sympathetic and appreciative helpfulness of those making the home, the architect has created for Mr. and Mrs. Charles D. Blaney, of Saratoga, California, something that not only breathes the soul of the country, but fits its own special location. It is the expression of an artist in conjunction with the aspirations of those who have sought cheer, beauty and comfort in a dwelling place.

Mr. Bruce Porter, noted throughout the West as an artist and critic, visited this house near its completion. Returning, he wrote:

It is a straight piece of enchantment. Exterior and interior are beautiful beyond any expectation of mine. Somehow, as I walked around through the house, it seemed to be a fulfillment of all the things that Mr. Worcester used to find in the art of the architect, and I could hear his chuckle of pleasure in my ears as I moved from one surprise to another. Somehow, being old and weary of art, the house gave me satisfactions that I have not felt for years and thought I could never recover. It is not in any aspect an imitation or an affectation. The architect, picking the spirit of early, spontaneous Italian work, has made it his own, bringing to it a sober, romantic playfulness that is the best of him. The house might have been there forever, or it may after all be only a dream. It strikes me as the most enchanting structure I've ever seen, and therefore may not be there when I go back."

In designing what is thus called a "most enchanting structure" the architect had complex conditions to meet. The

development of the plans comprised first of all the requirements of Mrs. Blaney as to arrangement and comfort. Mr. Blaney's requirements included not only considerations of expense, but in many instances extended to appearance and arrangement. The architect had to satisfy himself. Over and above all were the imperative and dominating elements of the site.

Repeated studies developed a series of failures. For months, with all considerations in mind, a successful result appeared out of the question. The problem, complex as to details, was time and again given up and as often resumed. More than a year was devoted to studies before the working plans were commenced.

The Blaney home is on the crest of a knoll overlooking the Santa Clara valley, the approach being gentle. The site was occupied for many years by an old-time ranch house. Stately live oaks, a stupendous pine, cypresses of later growth, an old well, a rose tree forty years old, a pathway leading down to where a dainty fountain now is located, surpassing vistas over the surrounding country -these were among the natural features to be considered. The entire undertaking must have failed had not these and the human considerations urged by the Blanevs and the architect been fused into a general scheme. If this place is a success at all. Nature is entitled to the greatest part in framing the design.

Approach to the house being up a gentle slope, the call for a steadily rising effect, culminating in the tower, became insistent. The roofs are not a jumble apparently placed in reckless abandon, as might be suggested, but they rise in a graceful crescendo to the tower, which in turn is at the crest of the knoll and commands a landscape of marvelous beauty.

There are features of the interior which needed special handling. The ballroom and theatre on the second floor is an instance. Mrs. Blaney is interested in children's work, and an exterior entrance giving access to the ballroom was imperative. A separate entrance through the patio around the old well is not only novel, but met this requirement.



RESIDENCE OF CHARLES D. BLANEY, ESQ., SARA-TOGA, CAL. WILLIS POLK & CO., ARCHITECTS.

Drawing by Harrison Clarke.





FLOOR PLANS-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARATOGA, CAL. WILLIS POLK & CO., ARCHITECTS.





SLEEPING PORCH OF A GUEST ROOM, FROM WEST GARDEN-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARATOGA, CAL. WILLIS POLK & CO., ARCHITECTS.



to an an an

Contraction :

WEST LOGGIA-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARATOGA, CAL. WILLIS POLK & CO., ARCHITECTS.



VIEW FROM MAIN APPROACH, WITH WALL OF KITCHEN GARDEN AT RIGHT-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARATOGA, CAL. WILLIS POLK & CO., ARCHITECTS.



WEST LOGGIA-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARATOGA, CAL. WILLIS POLK & CO., ARCHITECTS.

they ar



LIVING ROOM TERRACE, FROM NORTH GARDEN-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARA-TOGA, CAL. WILLIS POLK & CO., ARCHITECTS.



WEST GARDEN, LOOKING NORTH-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARATOGA, CAL. WILLIS POLK & CO., ARCHITECTS, J. H. P. ATKINS AND MRS. BLANEY, LANDSCAPE ARCHITECTS.



VISTA FROM HOUSE TOWARD POOL AT BOTTOM OF EAST GARDEN-RESIDENCE OF CHARLES D. BLANEY, ESQ., SARA-TOGA, CAL. WILLIS POLK & CO., ARCHITECTS. BRUCE PORTER AND MRS. BLANEY, LANDSCAPE ARCHITECTS.



Drawing by Harrison Clarke.

VIEW OF HOUSE FROM EAST GARDEN-RESI-DENCE OF CHARLES D. BLANEY, ESQ., SARA-TOGA, CAL. WILLIS POLK & CO., ARCHITECTS.

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GATEWAY FROM KITCHEN YARD TO WEST GARDEN -RESIDENCE OF CHARLES D. BLANEY, ESQ., SARA-TOGA, CAL. WILLIS POLK & CO., ARCHITECTS.



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The development of the gardens was really the personal work of Mrs. Blaney. In the west garden she had the collaboration of Mr. J. Henry P. Atkins, and here is located a most exquisitely dainty fountain, Italian in design. In the east garden she had the aid of Mr. Bruce Porter. Both Mr. Atkins and Mr. Porter grasped the spirit of the place and assisted Mrs. Blaney in the most sympathetic manner.

The roof tiles represent a notable advance in American architecture, worthy of special mention. California, as well as the remainder of the United States, has unbounded acres of tiled roof, all in bright brick red or green, and laid evenly, with mechanical care and mathematical exactitude. How the architect returned to first principles, as he believes, is told in a letter addressed to the tile makers more than a year ago. Here it is:

"Just as the steps of the Parthenon were not laid out in mechanically precise and straight lines, but in artistically designed and slightly curved lines, both in plan and elevation-just as its columns were delicately formed with an entasis of almost unattainable elusiveness-just as the geometrical centres of these columns were inclined inwardly so that their inward faces were plumb with and parallel to the inner walls of the peristyle, so I think did medieval builders purposely lay their roof tiles in uneven courses and in lines not exactly straight. After many years I have reached this conclusion.

"Furthermore, I think that the warm, gray tones of medieval roof tiles were the deliberate color choice of their designers and not entirely the result of the softening effect of the dust of ages.

"I think all this was deliberately planned. _

"I now desire to thank you for the trouble you have taken after years of patient experiment to finally achieve for me, in the roof of this house, a full realization of my dream that an artistic tiled roof is within the range of commercial possibilities. You have done this both in texture and in color. Furthermore, you have done this at a most moderate cost. You have truly made an artistic result a commercial possibility."

Returning from one of his trips abroad the architect brought with him tiles of the color and tone desired. To reproduce the old tiling in color and texture was the study of years. The illusion of age is one of the striking successes in the treatment of the roof of the Blaney house.

During the past two decades nearly all architects have contented themselves with the reproduction of famous types of different epochs in the evolution of architecture. Some of their work has been beautifully done and no doubt in many instances will in the future be referred to as examples of the twentieth century Renaissance rather than as replicas. The true twentieth century Renaissance will be found, perhaps, when architects, always with a proper regard for precedent, become bold enough to assert an individuality of their own.

With this Blaney house the architect has striven for originality, at the same time having consideration for precedent. He does not believe that it represents a realization of the dream for an American architecture, because nowhere else would this house be acceptable than where it is. It is essentially a creature of environment—but at the same time it is one of the finest offerings of Willis Polk to American architecture.



THE ART OF THE MIDDLE AGES BY ARTHVR KINGSLEY PORTER PART I



HE touchstone of art is intellectuality. If we consider the evolution of man from the savage beast we shall see that the art which he produces possesses permanent artistic value in measure as, in the progress from brutality, man achieves intellectuality and reflects this in his handicraft. Animals have no art. As man has evolved he has gradually attained the mentality necessary for artistic production. It is true that the quality of intellect required for attaining success in art is very different from that required for attaining success in other lines of human activity Thus it has come about that primitive peoples have at times produced greater art than races commonly accounted more civilized - a fact which in no wise disproves the general truth that art can only be created by brains, brains of a special type, but still brains. The collective mentality of a tribe may enter into the creation of folk-art and may prove itself the equal or superior of any single intellect of a later stage of development. is none the less intellect. If the progress of the artistic sense has not been steady ; if it has advanced rapidly to recede subsequently, it is only displaying a phenomenon constant in all evolution. Many forms of art require, in addition to mentality, technical dexterity; but the latter is in reality merely a means of expression for the former, bearing to it the same relationship that printing does to a book. Unless there be the conception, the emotion of beauty, dexterity of hand is of no avail. If we seek today the primary difference between a symphony by Beethoven and a "coon song," between a drama of Shakespeare and a play by Cohan, between a painting by Botticelli and an illustration in one of our comic weeklies, we shall find that, in each case, what is great and what is enduring differs from what is perishable

and of no account by the element of intellectuality. It is, therefore, in the scale of intellectuality that the value of any work of art must be weighed.

By modern architects one not infrequently hears the sentiment expressed that intellectuality in a building is a comparatively minor consideration, and that the really important matter is beauty as expressed in line, rhythm, proportion, mass, color, and so forth; that is to say, beauty and intellectuality are considered divisible and even antagonistic. A strange misconception! The sense for beauty is obviously an attribute of the human mind, merely one phase of intellectuality, nothing less, nothing more. It requires an intellectual effort and intellectual training to achieve. as to appreciate, proportion or mass or line or rhythm or color; and it is precisely according to whether a modern building achieves or fails to achieve these elements of intellectuality that it is judged good or bad. Of such formal beauty I shall say little; not because it is of minor importance, but because being common to the best architectural achievements of all ages it is generally recognized. No one will, I think, claim that formal beauty is lacking in medieval architecture. In classic art we shall hardly find a facade as happily proportioned as that of Paris; we shall hardly find more effective massing than in the spires of Normandy; we shall hardly find line used to greater advantage than in the portals of Chartres; we shall hardly find finer rhythm than in the interior of Amiens, or more impressive color than the glass of Le Mans. It is not at the expense of, but in addition to, these formal elements of beauty or intellectuality that Gothic architecture achieves also others of an even higher order.

There are many kinds of intellectual-

ity. Although most modern and Renaissance structures - in fact, it is not too much to say all - lack the great intellectual qualities of the buildings of the Middle Ages, they may nevertheless obviously be of high merit. A design which, from many points of view, is utterly illogical and absurd, violating many canons, not only of intellectuality but of common sense, like the Palazzo del Consiglio at Verona, may still possess other intellectual qualities, such as delicacy, rhythm and color, that justly entitle it to admiration. Similarly (although I should not wish to be understood as ranking the two buildings together) the Old Library in New Haven, notwithstanding very evident offenses against reason, still manages to achieve, by means of its proportions and rhythm, the softening of age and vines, a beauty which entitles it to rank among the best buildings of the Gothic revival in America. Such edifices amply demonstrate that it is possible for architecture to rise considerably with the aid of a limited intellectuality — flying on one wing, as it were. It is only, however, when all her feathers of intellectuality are fully grown that architecture can reach the greatest heights. A little intellectuality is better than none; but the greater the intellectuality the greater the architecture. Gothic is incomparably the most intellectual of all architectures.

Works of art are great in measure as they possess the quality of inexhaustibility. The obvious may captivate at first glance, but is incapable of bestowing an abiding satisfaction. Close and continued familiarity will, except in shallow natures, inevitably breed contempt for the meretricious. In art, as in aught else, we take out as we put in. The pleasure we acquire without the expense of effort will not endure. Here lies the final proof of the worth of medieval art. For no other style requires so much from him who would enjoy; nor is there any which extends such rich rewards to the happy initiate.

Together with the fundamental fact of criticism that architecture is good or bad according as it is intellectual, we must take into consideration two facts

of actuality, which, at first glance, seem so opposed to the usual twentieth century way of looking at things that they appear paradoxical, but which nevertheless, if we stop to consider a moment, are both evidently true. The first of these facts is, that the thirteenth century was a time of extraordinary intellectual development; and the second that the modern age, from certain points of view, is a time of intellectual degeneration. We are so in the habit of dwelling complacently upon the railroads, electric apparatus, machines, plumbing and other similar physical luxuries which we possess, and which obviously the Middle Ages did not possess, that we have blinded ourselves to the equally evident fact that this material progress has been accompanied by, and in a sense bought at the price of, the deterioration of several mental faculties. In the last few years modern thought has made a great advance in returning to the Middle Ages. By certain scholars the thirteenth has been pronounced the greatest of centuries. Superlatives are dangerous; but it is an undoubted fact that the result of recent research has been to increase more and more our admiration for the achievements of the Gothic period, not only in the realm of art, but also in the realm of pure thought. The very intellectual superiority of the Middle Ages was, in a way, the reason which led the Renaissance centuries to despise not only medieval art, but medieval thought. We moderns are eminently lazy, and our speculation always has primarily a practical or utilitarian scope. We seldom think anything out simply for the joy of the thinking. If we wrestle with an intellectual problem it is in order that we may attain thereby some material end. The Middle Ages, on the other hand, loved thought for its own sake. They wrestled with intellectual problems for the mere joy of overcoming them. It hence came about that the medieval thinkers arrived at results often of great esthetic beauty, but which seldom were of practical value. Modern speculators who cared entirely for the material set aside medieval thought, because they found that it was



NAVE OF THE CATHEDRAL OF AMIENS.

not useful in enabling them to improve the mechanical arts or to make new discoveries along practical lines. Being entirely absorbed in the solution of pragmatic problems, they chose to devote no energy to comprehending the purely speculative turns of medieval thought. In the last few years, however, we have begun to realize that this scorn of the modern for medieval philosophy was very largely the scorn of the barbarian who stood before the Greek marble and considered it valuable only for burning in the kiln to produce lime. It has begun to be perceived that medieval thought was exceedingly beautiful, exceedingly subtle, exceedingly profound; that, in short, modern thinkers, in rejecting this immaterial and absolute speculation, had rejected something that the world was very much the worse off for not having. Medieval thought may be compared to pure mathematics. The mathematician who follows his speculation in the solution of problems which can have no practical or utilitarian result-at least directly-and is yet so carried away by his intellectual curiosity that he gives his time and his genius lavishly to their solution, is the nearest approach, in our age, to the medieval thinker. It is almost inconceivable to us that mental gymnastics could have been enjoyed to such an extent and for their own sake. We who shrink from every mental exertion and can be spurred to mental activity only by the prods of our comfort or our pocket books cannot understand the overflowing energy of the medieval genius, its delight in intellectuality for its own sake, its scorn of the easy and the obvious, its love for the subtle. Yet the medieval mind, in a way, is as superior to ours as a spirited stallion is to a dray horse. By means of its exuberant, almost wasteful, energy, it achieved results of which we are incapable.

Medieval art is the faithful reflection of the medieval mind in its intellectuality, in its subtlety, in its avoidance of the obvious. Like medieval thought, it was long held in scorn and derision by later ages which were unable to fathom its profundity. Notwithstanding the increased appreciation of modern times,

the vital beauties of the Gothic cathedral still roll by far above the head, not only of the average layman, but also of the average architect.

A curious example of the modern lack of comprehension of the Middle Ages and of the modern tendency to scorn everything which it cannot understand is afforded by the history of the researches of Mr. Goodyear. This archeologist stated that medieval buildings were not built upon straight lines as modern buildings are. It was a question of a fact found in practically all medieval buildings, to be easily demonstrated and tested, even by a casual inspection. Mr. Goodyear's announcement was at first greeted with incredulity, and no one was more incredulous than the archeologists and the architects. In modern buildings the T-square and triangle rule supreme; all lines are straight, hard and metallic. It is therefore unthinkable to the modern architect that there could be any other way of building. Yet the medieval method of construction was infinitely more subtle, infinitely more For the obviousness of intellectual. regular spacing it introduced the subtlety of spacing which was not quite regular. For the obviousness of straight hard lines it substituted the refinement of lines which were not straight and not hard. For the obviousness of something taken in and comprehended at a glance it introduced something so subtle and illusive that its very existence was lost sight of for long centuries.

The same principle of variation is carried out in every detail of the Gothic structure. In a classical building all the capitals of an order are precisely the same. One model serves for the lot; it is impossible to distinguish one from the other. Gothic builders would never do anything so banal. They make each capital different; each has something new to say. The attentive observer will find in each a new design, a fresh beauty. Take a large building, such as a cathedral, which undoubtedly contains hundreds, and probably thousands, of capitals. The intellectual appeal afforded by medieval art, where every one of these capitals was a source of an intel-



WESTERN PORTAL OF THE CATHEDRAL OF CHARTRES.



THE PANTHEON, ROME.

lectual demand upon its creator and where every one affords an intellectual delight to the observer, is infinitely greater than in a classical building, where every capital is like every other and where all are designed according to a well established and immovable norm. Yet I do not think that the classic order, repeated thoughtlessly, almost mechanically so many thousands and millions of times, at its very best was absolutely more beautiful, better studied, more thoughtfully worked out, than a French capital of the twelfth century, which was a new and original creation forever unique.

It is not only in the capitals that the medieval building possesses this greater wealth of creative imagination. The same details are never repeated. Each molding is varied. The medieval cathedral is never obvious. Its choicest delights are reserved for those who study it patiently and long. Even the grotesques, which at first sight seem so naïve and simple that the word intellectuality can hardly be applied to anything so immediately appealing, are, in reality, extremely subtle. These strange creatures are infinitely varied among themselves, unlike the grotesques on a classical building, where, for example, the same lion-head is repeated many times. The medieval grotesques, as wild and elusive as the bats and rooks in whose company they spend their existence, are endowed with the fascination and mystery of untamed things. They are finer-grained, more sensitive than classic grotesques, just as the wild flower possesses a poetry lacking in cultivated blossoms. They reveal the intellectual thirst of the Middle Ages, their insatiable longing to know what might be contained in unknown portions of the universe. For in those days men lusted feverishly, unreasoningly after knowledge; and where means of accurate information were lacking they, just as we today, resorted to conjecture and imagination, with, however, the difference that their imagination was infinitely finer and more poetic than ours. The intense interest excited by the bestiaries is to be explained on this ground. The strange and romantic animals there described are



PALAZZO DEL CONSIGLIO, VERONA.



TRIFORIUM IN THE CHURCH OF ST.-REMI, REIMS.

largely those which are not found in Europe, and the Middle Age brooded long and thoughtfully over the marvelous characteristics of these fabulous beings of distant continents. The grotesques perhaps are merely another flight of the medieval imagination in its effort to conjecture what the fauna of unknown countries might be like. The Gothic artists set themselves no meaner task than to represent in the cathedral everything which exists in the universe. The church was the reflection of the supreme goodness of God, as manifested in the work of His hands. As such it was fitting that the animals of the world should be represented alongside the other manifestations of divine wisdom.

From an artistic point of view these lighter and more fanciful figures serve as a contrast to the profound and mysterious imagery which elsewhere adorns the cathedral. Like a burst of childish laughter they relieve the gravity of the long lines of saints, the soberness of the symbols of man's sin and redemption.

A classical building (unless it chance to be Greek) is understood at a glance. We may take the Pantheon as an ex-ample. There is one great dome, the portico before it, niches, and a certain amount of stereotyped decoration repeated with variations. One look at this building reveals to the educated eye all there is. The proportions, the rhythm, the grandiose conception, the simplicity, the undeniable greatness and beauty are at once comprehended. They are so evident that one would have to be stupid indeed to miss them. The consequence is that the Pantheon always has appealed to the crowd, and always will. Gothic architecture, on the other hand, is infinitely more subtle. The very fact that the Pantheon contains one large vault, whereas the Gothic church contains ten or twelve or more, makes the classical building much easier to comprehend. The mind catches at a glance the outline and shape of the structure. It is impossible to forget that there is just one dome in the Pantheon, whereas





SOUTHERN SPIRE OF THE CATHEDRAL OF COUTANCES.

even one who knows Amiens intimately would be unable to tell offhand how many vaults there are or how many bays the nave is long. The medieval conception is more subtle, less obvious. Also the details of a classical building, however exquisite, are easily comprehended; those of a medieval building cannot be completely understood after years of study. Nothing is placed in a Roman or modern building where it does not immediately catch the eye and show. The Gothic building, on the other hand, is full of exquisite detail lavished upon the roofs and cornices, in places where it is necessary to seek with the greatest perseverance to find it. It is natural that the intellectually degenerate modern age should prefer the classical building, and that modern architecture should be modeled upon it. We who are too lazy-as the existence of advertising proveseven to make the intellectual effort necessary to decide which kind of breakfast food it is best for us to use, but have to have the poorer kind thrust down our throats by means of electric signs and glaring billboards which we, the consumers, cheerfully pay for, rather than make the mental effort necessary to decide what we want,-we naturally prefer architecture that is built upon the principle of advertising, and that proclaims any merits it may have with such insistence that they cannot be missed. In fact, in modern American buildings, one will generally seek in vain for subtlety of thought or detail. Everything is obvious, pounded forth with a brass band, brandished in our faces. It is actually, as well as historically, exhibition architecture, with all of vulgarity that the word implies.

The Gothic architects, for all their interest in detail, were too wise to confuse their general design. In the façade of Reims, for example, there was absolute unity of composition. The broad masses of the buttresses, the form of the towers, the stories, were all marked as clearly as in a modern construction. The big divisions were not obscured by the profusion of detail. Yet the quantity and quality of detail was incredible. Each capital, each statue, each bit of

in the

tracery, each molding, was a masterpiece. The delight which this façade gave was therefore much greater than that which a modern building is capable of bestowing. We had not only the first joy in the main lines of the composition (such as we might conceivably receive from a modern structure), but the longer we remained the greater became our delight in the details, the existence of which was at first hardly perceived.

The Gothic builders applied the same principle to stained glass, which offers a striking example of the difference in spirit between medieval and modern art. The medieval artists made of their glass primarily an architectural accessory. When we first enter a Gothic church we see in the windows merely a mass of color-the most exquisite imaginable color. We distinguish no figures; we see no pictures. It is only when we approach closer that we see each of these windows is made up of a quantity of small medallions, and that each of these medallions contains a number of small figures. We have to look with attention to perceive them. When we do give this attention, however, we find that the pictorial design is worthy of the most careful study. Not only are the subjects represented full of profound philosophical and theological meaning, but the flow of line, the rhythm, the composition, and, above all, the coloring, are sources of unending delight. I have heard modern critics reproach medieval glass for not being naturalistic. They find fault with the figures because they are not lifelike. Nothing could be more characteristic of the nineteenth century attitude towards art. Some wit has defined modern architecture as that art which makes something constructed of one material look as though it were constructed of another, which, were it genuine, would be objectionable. Modern architecture, consequently, instead of being content to let stained glass look like stained glass, has sought to make it look first like a painting and then like the actual object represented. According to this point of view, the perverted genius who, in the Borghese Palace at Rome I think it was.



NÔTRE DAME, PARIS.



DETAIL OF SUMMIT OF NORTHERN TOWER, NOTRE DAME, PARIS.

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FRENCH STAINED GLASS OF THE THIRTEENTH CENTURY. PANEL IN THE COLLECTION OF MR. HENRY C. LAWRENCE, NEW YORK.

painted upon tables papers and books so realistically that almost all visitors attempt to pick them up, would be an artist of the highest order. As a matter of fact, realism in itself is not a highly desirable quality, even in pictorial art. The modern schools of painting are revolting from it, and the best critics are preferring more and more the unrealistic Italian painters of the fourteenth and fifteenth centuries to the realistic artists of later ages. If a painting has beauty of content, line, color, and composition, the realism is an entirely minor consideration; and how much more is this the case with stained glass, which, because of technical limitations, never should rival a painting!

The modern glass-painter who puts in his windows a great glaring figure of realistic character achieves obviousness at the expense of intellectual value. Such figures we take in at a glance, or at half a glance. They are eminently un-architectural, break the structural contours and call the attention immediately from the large divisions. Like an advertisement, they catch our eye; but like an advertisement also, they give us little in return for our attention. The carefully thought-out detail, the content of subject, the deep, strong, virile color - in short, the intellectuality of ancient glass — are painfully lacking in the great majority of these modern creations.

In regard to the coloring of medieval glass, it should be noticed that its effect is never obtained by the use of large fields. Small pieces of blue and red and other colors of primary hue are placed next to each other. From a distance these colors combine to form one tone of entrancing brilliancy. As Dr. Durham has called to my attention, modern art made the discovery that the finest color effects are produced, not by mixing the paint before it is put on the palette, but by placing bits of the elementary hues alongside of each other on the canvas and leaving the eye to fuse them. For example, if we want to produce a purple there are two methods of doing so. We may mix the blue and red paint together and then color our glass or our canvas, and this



THIRTEENTH CENTURY GLASS IN CHURCH OF SAINT-JULIEN-DU-SAULT, YONNE.

is the usual manner of procedure. The more effective way, however, and the Gothic way, is to place very small bits of blue and red beside each other and let the eye blend them to form purple. By this means the Gothic glass-painters not only achieved a richer and more

vibrant tone, but they avoided running into obviousness by the use of broad fields of color. A window made on this mosaic system does not strike the eye to the same extent as would a window in which are used the same colors and in the same amount, but in broader fields.

(To be continued.)



GARGOYLE REPRESENTING JONAH AND THE WHALE-CHURCH OF ST.-GERMAIN-L'AUXERROIS, PARIS.

DESTRUCTION OF HISTORIC BUILDINGS AS REVEALED by the OFFICIAL FRENCH WAR PHOTOGRAPHS

By THOMAS E. TALLMADCE

III.-Parish Churches

HE mighty walls of Reims and Soissons, by their vast extent and tremendous inertia, have succeeded in resisting, in part at least, the fury of the exponents of Teutonic kultur. But not so the little churches. These are what are known to the artillerymen as "oneshot" churches. In most cases their wounds are beyond the healing power of restoration, and in many cases the demolition has been absolute. This is obviously the result of the slight resistance offered to large shells, and, also, is owing to their frequent occurrence in disputed villages, where the entire town has been utterly destroyed by concentrated shell fire.

Many of these humble fanes were insignificant architecturally and historically; others are of the greatest archeological and architectural interest.

The greatest loss in the realm of ecclesiastical architecture, after the cathedral itself, is the ancient church of St. Remi at Reims, a building, according to A. Kingsley Porter, Transitional in style, begun on the site of an older church in 1005 A. D. Of this older church some traces remain. The greater part of the building, however, dates from the reconstruction of 1170. The choir was one of the most beautiful examples we had of Transitional architecture. Its flying buttresses were very ancient, dating from the latter part of the twelfth century. Romanesque monuments are rare enough, and the destruction of St. Remi is one of the greatest losses which we have been called upon to bear.

Of the smaller churches, Acy-en-Multien is the most important on account of the great archeological importance of its vaulting. In Acy-en-Multien, Mr. Porter is convinced, occurs the earliest ribbed vault in the Ile de France. In a letter to the author he sayst "This I regard as the most important small church in northern France, and the one that contains the key to the puzzle of the introduction of the ribbed vault into France. . . I think that the ribbed vault (under the tower) cannot be later than the year 1100." Our photograph does not seem to reveal any destruction of moment, but does not show this tower with its famous eleventh century vault.

What Acy-en-Multien is to the protagonists of the thesis that the ribbed vault was imported, Rhuis, in the Department of the Oise, is to M. Pontalis and his distinguished confréres who believe that the ribbed vault is indigenous. In view of this controversy the loss of these two monuments would be irreparable.

The church of Tracy-le-Val, Oise, according to André Michel, in the "Gazette des Beaux Arts," is utterly destroyed. It had a famous octagonal tower resting on a square base, the transition being effected by the sculptured figures of angels. The sanctuary was vaulted in the Lombard style, and the façade a gem of Romanesque design.

Vailly, in the Department of the Aisne, was famous for its façade. Its interior, with Renassance vaulting in the aisles, is entirely destroyed. It dates from 1170 to 1230. The façade, with its beautiful ornament, as the photograph shows, is badly battered. The tower, which appears to be demolished, dates from the twelfth century.

Roye-sur-Matz, Oise, is a curious high-shouldered church, with a roundarched portal and an early rose window. The roof and, presumably, the interior are badly damaged.

St. Remi, in the historic town of Fontenoy, was an ancient church, the nave, according to M. Lefevre Pontalis, dating from about 1110. The choir was barrel



ACY-EN-MULTIEN.

vaulted, and terminated in a semicircular apse, which we see in the photograph breached by a great shell. The tower (lower part about 1140; upper portion thirteenth century) is almost destroyed.

Other churches, of which we have photographs, but about which I have been unable to obtain documentary evidence, are as follows:

Berry-au-Bac, Aisne, is apparently of the fourteenth century. The church has transepts and a semicircular apse. The vaults of the nave and crossing are destroyed, together with the tracery of the apse.

The name of the small chapel in connection with a château in the valley of the Somme is not given on the photograph. It is of the fifteenth century, with an altar and with niches that contain statues in the style of Francis I. It is generally wrecked by shell fire.

Les Hurtus, Marne, is an ancient building of the early thirteenth century, with a semicircular apse. The photographs show the utter destruction of the vaults of the choir and apse.

At Louippy, Meuse, is a small church

in connection with the château. It is Romanesque in style, though possibly the tower may be modern. The tower, vaulting and roof are destroyed.

At Haurupt-le-Montois is a building in the Transitional style, with a tower either modern or thoroughly restored. The tower walls and vault are practically demolished.

Flirey, Meurthe et Moselle, is so badly wrecked that it is impossible to determine the period, although apparently it is Gothic of the fourteenth or fifteenth century.

Beauzée, Meuse, is a very interesting church in the Flamboyant style, built on the hall church plan, with the aisles of the same height as the nave. The tracery and the tower are graceful and interesting. The vaults are largely destroyed and the vaulting damaged in every part.

Of Marquivilliers, Somme, the photograph shows only a corner of one aisle, entirely wrecked, with a few moldings, which indicate twelfth century workmanship.

The Church of Souain is a formless pile of débris.


ROYE-SUR-MATZ.



ST. REMI, FONTENOY.

Automation .





Sec. ++



CHAPEL OF A CHATEAU IN THE VALLEY OF THE SOMME.



LES HURTUS, MARNE, CHURCH CHOIR.

136



CHURCH OF A CHATEAU AT LOUIPPY, MEUSE.



HAURUPT-LE-MONTOIS.

hitistle





Martin S.

Mail 200 page - Call







MAUZET-SUR-MARNE.



BETHENVILLE-SUR-MARNE.

142



5 BIP

THE ARCHITECTURAL RECORD.



ABBEY OF ST. ELOI, MONT ST. ELOI.



145





NEUVILLE-AU-PONT.

Cillolay, in the valley of the Somme, contained a large and beautiful church of brick and stone in the late Flamboyant style. Now, only the side walls and the vaulting of the crossing remain intact.

At Mauzet-sur-Marne there is a small church with mingled Romanesque and Gothic motifs, possibly modern, although the Renaissance altars appear to be antiques. The vaulting of the choir and the apse has been destroyed.

The Church of St. Eloi, at Dunkirk, is a building in the Flamboyant style, showing Flemish influence. Serious damage has been done to the exterior and the vaulting of the nave is entirely destroyed.

In Steinbach there is a three-aisled church of uncertain age, with German motifs. The vaulting of its nave is, for the most part, destroyed.

At Clermont-en-Argonne is a curious and interesting church with frescoed decorations, apparently of the fifteenth century. Although the photograph shows but one aisle, it seems to indicate that the vaulting of the nave has been destroyed.

The Abbey of St. Eloi, at Mount St.

Eloi, is a Renaissance building, of which only one corner now stands—in ruins.

At Bethenville-sur-Marne there is a thirteenth century church, the nave and aisle vaulting of which have been destroyed.

The Abbey St. Leger, at Soissons, is a Renaissance building in the style of Henry IV. Its belfry is half destroyed.

The church at Sillery is of uncertain age, possibly modern. The vaulting of the apse has been destroyed.

Neuville-au-Pont contains a small church of the fifteenth century. Its nave and aisles have been wrecked.

The church at Perth is entirely destroyed.

What eloquent and touching testimony the ruins of these little churches bear of the architectural vision and technical skill of their creators—the parish priests and the village masons! Like simple but exquisite flowers, clustered about the giants of the forests, they dot the plains of the Ile de France in the shadow of the great cathedrals, rejoicing in their strength and mutely sharing in their destruction.



PLAN OF THE MEMORIAL QUADRANGLE OF YALE COLLEGE. JAMES GAMBLE ROGERS, ARCHITECT.

Memorial Quadrangle Of Male College James Gamble Rogers. Architect By Marrion Wilcox

XFORD, I doubt not (Oxford's town, university, meadows, Cher, Isis and all, altogether), would have a part of the charm it now ownsthat of an intimate, far inland English landscape, so well painted and so long ago-even if the ancient university there were less obviously in conceded possession of the heart of the still more ancient town. But shall we say, or can we say, all of the present and ever-present charm? Surely Oxford would not have that unless the university and the town had learned to grow old together, yet to keep young together incorrigibly-to stay young bravely, hopefully, and in union. Oxford might once have contrived to divorce college from town topographically. Mr. Aymer Vallance, in his delightful book, "The Old Colleges of Oxford," touches upon the relative topographical situations of university and city there, and says that the latter "was of no great dimensions, nor was it laid out to accommodate the university"-which nevertheless "has thriven and expanded by a persistent policy of absorption." Does not the reader think that a wise choice was made in that instance; that new structures raised on entirely new sites, having no sort of historic continuity, would have fallen short of an architectural composition like "The High": that sometimes it is an essential error to found and establish colleges and college buildings quite outside of and quite away

from the towns they belong to, the towns that belong to them? For my own part, I certainly entertain that opinion; and so I am heartily glad that the Memorial Quadrangle of Yale College will stand at or very near the centre of the dear old town of New Haven.

The cornerstone of the memorial quadrangle, a gift to Yale in memory of Charles William Harkness, of the class of 1883, from his mother, Mrs. Stephen Vanderburg Harkness, was laid October 8, 1917. It will occupy the entire block bounded by High, Library, York and Elm streets. The president of the university says in his annual report (page 19) that "as Mrs. Harkness arranges to give the buildings and meet all expenses of erecting them, whatever those may prove to be, the exact amount of the gift cannot be stated; but it will in any event be very large." The Yale Alumni Weckly says: "For years the need of housing all the College students in Campus buildings has been one of the most serious of Yale problems. The munificent gift of these dormitories, to house over 600 undergraduates, most satisfactorily solves this problem, which was certain to have become a serious one again the moment the war was over. In the process of doing this, other problems likewise, and unexpectedly, have been solved : the University receives a new steam heating plant on York street near Grove, and the long-delayed erection of a proper

Peabody Museum on the Hillhouse grounds at the head of Hillhouse avenue is now assured. The result of the whole undertaking will be the largest and most notable building operation that Yale Univerity has ever seen, and one of the greatest of any American university. The gift of these dormitories is in memory of a graduate to whom his college life meant much, and who, all his life, quietly did much for Yale. The building will be known as The Memorial Quadrangle, the beautiful tower alone to bear the name of Mr. Harkness."

The plans of the architect, Mr. James Gamble Rogers, who was graduated at Yale in 1889, show that the great "Quad" is formed by the grouping of six courts, of which the largest extends through the block from High street to York; the smallest (three courts) occupying the Library street side, where the buildings are to be low, and those of intermediate size (two courts) being surrounded by the higher buildings on the Elm street side. The dormitory buildings of varying heights surrounding these courts will all be of stone, and will be examples of English Gothic architecture. There will be two entrances from the north, two from the south, one from the west and one from the east. The last-mentioned is the main entrance, and adjoining it will rise the Harkness Tower, the most impressive feature of the entire design. The studies and bedrooms will be grouped in accordance with the traditional "entry" system, and in each block of dormitories there will be "commons" halls. A sunken area, or moat, surrounding the entire group "will not only protect the buildings from marauders, but also relieve the height of the lower structures." As actually planned, the whole group will supply accommodation (1.266 rooms in all) for 630 students. It is thought that the time required for building operations will be more than two years.

Our readers will remember that the old quads at Oxford are formed by buildings that as a rule have not more than two or three stories—unless they be towers or halls; that at the best periods a strong preference was shown for the two-story plan, as at Christ Church. Now, the same moderation is observed in that portion of the great quad at New Haven which runs along beside Library street and assuredly is not "too low for high praise." The thoughtful consideration bestowed by the architect upon this question of height, in its relation to the problems of the free admission of sunlight and utilization of land-surface, is worthy of special notice. The esthetic values of low buildings are recognized. Mr. Rogers has said that, as this was to be a group of dormitories only, it seemed fitting that the general effect should be entirely residential, or homelike; yet to accomplish this most advantageously it would have been necessary to make all the buildings low-which was precluded by the requirement in regard to housing such a large number of students. He decided, therefore, to make some small courts enclosed in low structures and some larger courts with higher buildings. This idea was developed into the accepted plan for a group of six courts, of which the largest (the "campus") is about 150 feet wide and 260 feet long. "Then, to get the fullest advantage of the southern sun," he placed the low structures at the southern, or Library street, end of the group, and the higher buildings at or toward the northern (Elm street) side; the dormitories extending along the "campus," from High street to York (east to west), being somewhat lower than those along Elm street, and having "here and there the roof slanted a story lower on the north side to facilitate just that much more the desired admission of all the sunlight possible." The revised plan and model, November 26, 1917, shows a still more marked reduction in the height of structures in this portion of the group.

The architect's solution of problems relating to entrances, stonework and rooms may now receive our attention. He says that, inasmuch as there was not available any well-defined plan of the university buildings in general, his task was to design entrances that would be best at the present time, and which also would be most likely to prove serviceable in the future, as the university continues to expand. It seemed best, then, that the



WEST ELEVATION OF THE MEMORIAL QUADRANGLE OF VALE COLLEGE. JAMES GAMBLE ROGERS, ARCHITECT.



HARKNESS TOWER, AT THE MAIN (EAST) ENTRANCE TO THE MEMORIAL QUADRANGLE OF YALE COLLEGE. JAMES GAMBLE ROGERS, ARCHITECT.



DETAIL OF EAST ELEVATION-THE MEMORIAL QUADRANGLE OF YALE COLLEGE. James Gamble Rogers, Architect.

principal gateway should be on the side nearest to the old college campus, at a point opposite the open space between Dwight Hall and the Old Library. This entrance, adjoining the dominant feature -the Harkness Tower-as we have said, opens directly into the largest court, thus affording grateful views in deep perspective of the secondary tower and structures at the opposite end of that court; and similarly attractive vista effects are planned in connection with each of the five other entrances. Surrounding the entire group, save at these gateways, there will be a wall, and between this wall and the buildings, the sunken grass area about four feet in depth, to which reference has already been made.

By dint of continuous study and experimentation, the effort to secure the best architectural results and to perfect the original design in every detail goes forward steadily. Thus, Mr. Rogers says: "In order to get satisfactorily the stone jointing, texture, color and mortar, we have had five different walls built in New York City. When we obtained one that seemed correct, we had a larger one built in New Haven where it could

be studied in the same light and under the same conditions as will affect the permanent buildings. All this preliminary study costs money, but it is not extravagant or wasteful, because it will in the end save many times the amount expended;" and it is indeed evident that such careful experimentation naturally leads to the discovery of economical methods in the use of materials, or perhaps more frequently to time-saving, to avoidance of delays eventually, by and through "knowing exactly what to do." Mr. Rogers says that a lesson in the economical employment of mortar has already been learnt. Well, some of the oldest stone edifices we have ever seen in the New World were built entirely without mortar. The importance of details, even minor details, of the stonework is suggested in the statement that the exterior surface alone just about equals a wall higher than the average house and one mile long. As for the kind of interior construction adopted, Mr. Rogers says it "will be masonry walls and reinforced concrete floors and columns, this being considered the best for durability and protection. But the details are studied

in such a way as not alone to secure fire protection but to insure the minimum of upkeep. The entry system was adopted without much discussion, and its many advantages for safety and convenience were so apparent that it was considered bedrooms with each study. The studies are to be about fourteen feet square, and bedrooms eight by eleven feet. The dimensions of single rooms are varied not only in order to utilize space to the best advantage, but also—and more particu-



TOWER BUILDING AT NORTHEAST CORNER OF LARGE COURT —THE MEMORIAL QUADRANGLE OF YALE COLLEGE. James Gamble Rogers, Architect.

almost a requirement. The stairs are as nearly fireproof as can be made, being of stone with not even a wood handrail, the handrail being cut into the stone. The stairs are to be built in the old-fashioned way, the step being of a solid piece of stone supported by the masonry wall at each end." There are about 130 single rooms, a number of suites of one study and a single bedroom, and some groups of one study and three bedrooms; in general, however, the arrangement is still as it was in the "Old Brick Row"—two larly—to avoid uniformity, to increase the sense of individuality that should inhere in each room.

The Harkness Tower is, of course (as our illustration shows), not the outcome of any Oxford suggestion, but a strikingly successful adaptation of the St. Botolph "couronne" tower at Boston, England. The potent charm of affectionate association will always seem and be—a part of the very fabric and texture of this memorial. And another tower will have associations appealing



A DORMITORY IN LIBRARY STREET-THE MEMORIAL QUADRANGLE OF YALE COL-LEGE. JAMES GAMBLE ROGERS, ARCHITECT.



STAIR ENTRANCE, CENTRE COURT - THE MEMORIAL QUADRANGLE OF YALE COL-LEGE. JAMES GAMBLE ROGERS, ARCHITECT.



STUDY FOR THE MEMORIAL QUAD-RANGLE OF YALE COLLEGE. JAMES GAMBLE ROGERS, ARCHITECT.



CENTRE COURT, LOOKING NORTH-THE ME-MORIAL QUADRANGLE OF YALE COLLEGE. JAMES GAMBLE ROGERS, ARCHITECT.

to the sentiment of loyalty. Mr. Rogers tells us of this when speaking about his method of planning architectural operations up to the date of the cornerstone laying, exactly 200 years after the first building on the New Haven Campus was begun. "Instead of asking of the University all the various requirements," he says, "I asked only for the size of the lot and the number of rooms required. and then made the plans. After this I received from time to time requests for different things, all of which I think have been incorporated. Mr. Stokes [Secretary of the University] expressed the wish that we might in some way have a suggestion of Wrexham Church Tower, where Elihu Yale was buried. We readily changed one of the towers to Wrexham, and in return asked him to get one of the stones from Wrexham Tower which would be built into our tower, thus tying the bond just that much closer. This is especially fortunate, for, in many of its details and in much of its spirit, it is like the main tower, the Harkness Tower." By which anecdote we are led, as it were, into the very presence of that spirit "nourished for a time, and times, and half a time" and then cherished faithfully at our great institutions of learning, where it is sometimes known as the spirit of the place or the spiritual side of education.

Why should that be mentioned, and italicised, in this article? Simply because President Hadley's very interesting remarks (see Yale Alumni Weekly, October 12, 1917) when he accepted Mrs. Harkness' gift should be brought to the attention of architects by repeated publication. The very distinguished

speaker said: "Of the various means to develop and perpetuate this spiritual side of education, beautiful buildings are one of the most important. Cardinal Newman placed them in the forefront among educational agencies, as more essential to the main purposes of a college than anything else. There are many reasons for thinking that he was right. A monumental building, if it be really beautiful and glorious, gives a visible and permanent object around which life and loyalty can grow and to which tradition and sentiment can attach. The man who looks out day after day into the college quadrangles of Oxford or Cambridge finds a stimulus both to his love of beauty and his love of learning. Such influence is more needed today than ever before. The waste of war is destroying churches and castles and glorious monuments of antiquity. Unless the world builds new centres of beauty and affection to take the place of the old, the twentieth century will, in spite of material progress, be essentially poorer than the nineteenth. And war has done more than lay buildings waste. It has, for the moment at any rate, distorted our standards. It has compelled us to look too much for immediate efficiency rather than permanent utility; to seek tangible effects and disregard intangible ones; to work for achievements of the moment rather than for those of the ages. Doubly important, then, is it to renew our supply of tradition and inspiration by buildings like this; to bring home to the students who shall live within these walls the lessons of affection and loyalty and love of the beautiful which should go into the life of an ancient college."



WREN PERIOD CARVING FROM WINCHESTER COLLEGE CHAPEL.

English Architectural Decoration Text and Measured Drawings by Albert E. Bullock

Part IV.

T HE transitions connecting the chief changes in architectural expression in past ages were generally heralded by marked literary effort, which has been recognized by many to have a distinct influence upon the style subsequently developed. Decoration naturally followed in the wake of these fresh innovations, the social conditions of the people reflecting, in more or less intense degree, the dignity of Court customs.

From the time of Charles II to George IV these conceits were nicely balanced and mirrored in the habits of the King's subjects, especially among those whose duties involved intercourse with France.

Social customs governed the planning of buildings, the apartments being subject to the domestic necessities of the age and the degree of importance of an owner's position in life. Thus, in the Georgian period, a small antechamber connecting a bedroom was utilized as a "wig" chamber, where the visitors' wigs were hung in rows upon wooden pegs, and where they were also powdered and dressed. Such a room still exists at Belton and some of the larger mansions of England. In modern times our canons of sanitation have found a use for this room in the bathroom.

This change in the plan of houses through the various decades is a very interesting study. The E and H shaped house of Elizabethan and early Jacobean times were built with lofty rooms in which there were usually one or two long galleries used for receptions. The character of these is charmingly illustrated in Nash's Mansions, with the additional local color given by the costumes of the people of the age he poetically in-Montacute House, Somerset, troduced. Kent, are typical examand Knole, ples: while there still stands in Essex a smaller brick-built residence of the period, known as Eastbury Manor. This house is of the H type, but the connecting arms of the wings project considerably at the rear, giving opportunity to form a yard or court at the back by means of a wall connecting the gabled ends of the In the internal angles, formed wings. by the wings and body of the building, octagonal towers were built containing circular staircases with solid oak steps joined to a massive central newel post. Early Victorian alterations have hidden the interior arrangement by a multiplicity of rooms, but there is no doubt that it followed the precedent of current examples in having a screen dividing the presence chamber from the entrance.

The plan changed toward the latter end of the reign of Charles I, by having a large central hall with a gallery above giving access to the principal rooms, as at the Queen's House, Greenwich, and The Pynes, Devon. The approach to the residence was frequently by means of a flight of stone steps or a terrace, which obtains also at Wilton, Raynham and other of the larger mansions built by Inigo Jones.

by Inigo Jones. With Sir Christopher Wren and William Talman the French plan was adopted as practiced by Gabriel and others at Versailles, the rooms being arranged around courtyards and communicating together by means of doors placed opposite each other in order to give a vista of the palatial splendor of the place within. This idea is carried out at Hampton Court Palace, Chatsworth and Belton; except that Belton is a rather smaller residence compared with the two There existed until recently a former. small house in Love Lane, in the City of London, of the Wren type, believed to have once been inhabited by that famous architect. The plan was very simple, with a wide entrance hall and staircase beyond, having square paneled newels, heavy balusters and cut string.

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GENERAL VIEW OF DINING ROOM-BELTON HOUSE, NEAR GRANTHAM. ABOUT 1680. WREN.



PANELED ROOM FROM A HOUSE IN NORTH WALES, ABOUT 1692. IN POSSESSION OF MR. F. W. PHILLIPS, OF HITCHIN.

(Alleria)



DOORWAY ON STAIRCASE—THE WARD SCHOOL, LOVE LANE, LONDON. WREN PERIOD.



CHIMNEYPIECE IN ROOM FROM CLIFFORD'S INN, LONDON, 1668.



PINEWOOD CARVED SWAG AND DROPS. IN VICTORIA AND ALBERT MUSEUM.



DETAIL OF CEILING-THE QUEEN'S HOUSE, GREENWICH.



DETAIL OF CEILING-THE QUEEN'S HOUSE, GREENWICH. INIGO JONES, 1637.



PANEL UNDER CARVED FRAME-HOLME LACY.



DETAILS FROM VICTORIA AND ALBERT MUSEUM.



WALL SWAG FROM BELTON, NEAR GRANTHAM.


CARVED FRAME FOR PICTURE PANEL, WREN PERIOD-HOLME LACY, HEREFORD.









DETAILS FROM WIL-TON HOUSE, WILTSHIRE.

The doorways had pedimented architraves; while a square room on the ground floor was paneled in oak, having for ceiling a large enriched circle joined by smaller wreaths within the cornice molding. This room has now been removed to the new Ward School of Sir John Cass's foundation in the City.

Another room of interest of this time is the Board Room of the New River Company in Rosebery Avenue. This is a very fine room, now being incorporated in the new buildings, and consists of a lofty oblong oak-paneled chamber, with windows at one end, having a beautifully curved chimneypiece by Grinling Gibbons, with his familiar galaxy of ornament, finely carved, modeled and interlaced in the perfection of his genius. What enhances this room so well is the enriched and colored ceiling, having a large oval painting in its centre with a surround of modeled plaster of a design with fruit, flowers and birds picked out in appropriate colors. In addition there are numerous subsidiary panels modeled with subjects to represent scenes along the New River, from which travels the refreshing water that supplies the populace of London. The whole theme is at once so complete, ingenious and perfectly executed that I venture to think it forms the greatest masterpiece of the age extant.

Following Wren were Lord Burlington and his school, including William Kent, Colin Campbell, James Payne and others, who for the most part adopted the principle of the greater lights of the previous ages-viz., the works of Inigo Jones and Wren in details-but in planning strove after a combination of classic ideals with Italian villa effect. Viewed at the present perspective their efforts were not successful; they were mere copyists and adapters with little genius, with one exception in the person of James Gibbs, who justified his existence to a greater degree. He possessed genius both in planning and design; while his decoration, if a little florid, is of much interest and particularly well executed. He was the last true representative of the Georgian era of architecture.

A decided change is noticeable with the introduction of the Classics as practiced by Sir William Chambers, of which Somerset House is still the cream of Thames riverside edifices; while his decorations in Pembroke House, Whitehall Gardens, are distinctly above the average productions of any of his contemporaries. In decoration Chambers developed a style that was based as regards its motif upon a combination of Chippendale with Louis XV, which harmonized admirably with the severer classical details of other relative parts of his designs.

He was followed by Sir John Soane in the same school, who also became lecturer to the Royal Academy of Arts. Although a deep and learned student, the works of this architect did not appeal to all. The Bank of England is his principal achievement extant, including some minor works in various parts of the country and many churches.

His planning, like that of Chambers, was utilitarian, and both endeavored to evolve unique outlines of geometric form within which to clothe the accommodation required by some of their clients.

In temper Soane was a passionate man; he married an heiress, and during his lifetime acquired many valuable works of art, including an extensive architectural library, which embraces many volumes of original designs by the brothers Adam, among other valuable manuscripts. By act of Parliament he bequeathed his house, library and museum in Lincoln's Inn Fields to the nation; and the same is a very valuable asset to the art students of London.

The brothers Adam, by the employment of Italian artists, invented a new and original form of light decoration which is not a little adapted from a combined development of Louis XVI and French Empire styles. Incidentally, it is known by many as "English Empire."

Following upon the researches of Winckelmann at Herculaneum, the brothers Adam carefully studied the sculptures at Spalato and very cleverly adapted many of the features to their new style of decoration, which developed with their increased and popular practice.

Sion House, Isleworth, with its famous stone screen, is one of the most complete examples of their work; while most of the notable houses existing at the time boast at least one or two rooms decorated in their peculiar manner. Belton has a library with depressed barrel vaulted ceiling of this cult, and even Ford Abbey contains a small reception room with a light decoration of the period.

Furniture was designed of lighter character to be in keeping with the style, and Sheraton, Hepplewhite and other joiners vied with each other in their productions. Locks, metalware, candelabra, etc., all followed suit, until a complete estrangement from anything previously known was developed.

The materials employed were equally ingenious, many enrichments being executed with carton pierre on deal or with pewter. Iron grilles to over-door openings to the entrances of houses formed a valuable point of advantage upon which to centre their energies, and color schemes of black and gold were not infrequent.

Their popularity not unnaturally made their competitors envious, and competition became very keen after awhile, to the undoing of the style and vulgarizing of its many features.

An attempt will be made to illustrate the styles previously narrated in future articles, the work of Inigo Jones at Wilton forming the present subject.

The scheme of these rooms is largely cream and gold, with white marble chimneypieces.

The state rooms at Wilton are very handsome and extend the whole garden front. The central room, known as the "Vandyck" room, forms in dimensions a double cube, being sixty feet by thirty, by thirty feet to the large coved ceiling, while the adjoining room is thirty feet square and thirty feet high.

The enriched moldings are very small in proportion to the areas covered, and it will be noticed that provision is made for the systematic hanging of pictures by providing special spaces and panels for them, which feature was adopted in most of the subsequent styles, but was totally ignored during the previous Jacobean and Elizabethan eras.

[Part III of Mr. Bullock's series was published in April, 1917. Owing to increasing irregularity in the transatlantic mail service, Part IV was not received in time for the May issue. The break in publication having occurred, it was thought advisable not to resume the series until all the remaining papers had reached us. These will now appear without interruption during the rest of the year.

Readers who have followed the valuable series will be interested to learn that some of the old woodwork described by Mr. Bullock is preserved in the Victoria and Albert Museum, and has been very fully illustrated in the Museum's publications. This is the case with the paneled room from the old Palace of Bromley-by-Bow and with that from Clifford's Inn. Each of these rooms is the subject of a monograph published by the Museum at the nominal price of sixpence. Two other monographs deal with a room from Sizergh Castle, Westmoreland, and with the boudoir of Madame de Sérilly from the Rue Vieille-du-Temple, Paris. Additional monographs on exhibits in the department of woodwork of the Museum will be published after the war.-Ed]



TE point with especial pride to our educational system, but we have been slow in improving our rural schoolhouses, most of which are poorly heated, improperly lighted and unventilated. More than one-half-about 12,000,000, or three-fifths-of the school children in the United States are attending schools in towns of less than 2,500 One-half of this number, inhabitants. or 6,000,000 children, receive their first and frequently their only education in the one and two room schools scattered over the countryside. It is scarcely possible to imagine a more unfortunate environment for the formative mind of the school child than that presented by the traditional country school. However, it may be said to the credit of the rural communities that many of them are eager to better existing conditions.

In many communities the school buildings not only house under compulsion twenty per cent. of the total population for eight hundred hours each year, but they also serve as chapels and general meeting places for the people in social and quasi-political gatherings. This community-centre function has only been partially developed, but it is actually a service that the schoolhouse should render and that is quite as important as housing the classes in the three R's. In the past, home and school were total strangers. The reasons for the estrangement between these two principal centres of education are to be found, on the one hand, in a misconception as to the school's object and, on the other, in social conditions.

The school, it was held, had no other duty toward the community than to supply the children with book knowledge. That a sound and natural development of community spirit and social betterment should go together with the intellectual · development of the children, and form a natural foundation for all education, the

school never considered. To fulfill its purpose completely the school must extend its influence beyond its walls into the homes of the community and into business and social intercourse.

There is at present a very commendable tendency in certain localities to consolidate a group of adjacent district schools under one roof and to transport the children from their homes to the school in omnibuses or automobiles. Such a plan not only insures improved accommodations for the school children, but also effects economies in teachers' salaries, heating and repairs. Various schemes have been followed out in making this consolidation. If it be a group of schools within the same township, the so-called union school has been constructed; and the various districts pay per capita rate for the children attending the school. If, however, the children are drawn from two or three townships, frequently the towns will cooperate in constructing the building and then pay the educational costs proportionately, or one town may erect a building independently and per capita costs are paid by the other When such a building is contowns. templated a more pretentious and completely equipped plant is possible than was ever afforded by the familiar oneroom rural schoolhouse.

It is scarcely possible to outline a definite plan for such a building, since many variations must be considered in each locality, such as site, structural materials and capacity. There are, however, certain fundamental standards which must be taken into consideration, and should be adopted everywhere without variance.

LIGHTING.

The subject of illumination is highly technical, and the practical application of the principles involved, in so far as daylight illumination is concerned, is not easy, due to the absence of working standards. Recently, however, certain requirements for the daylight illumination of classrooms have been deduced. The object of these requirements is:

1. To insure a maximum of light from the right direction.

2. To insure a maximum diffusion with avoidance of objectionable glare.

3. To make suitable provision for regulation of the light by increasing or diminishing the amount admitted, as necessity may demand.

In order that sufficient light may enter the classroom properly to illuminate all desks, certain standards have been adopted.

The most widely accepted standard is the one which requires the glass area of classroom windows to be not less than one-fifth of the floor space of the classroom. This standard, however, does not cover all the factors which should be taken into consideration. In order to have each desk properly illuminated, it has been suggested that the child sitting at the desk should be able to see a part of the sky vault from the seat, and that this visible sky surface be measured by a reduced solid angle of not less than 50 square degrees. This presupposes that the angle of incidence of luminous rays -that is, an angle formed by a plane from the upper surface of the desk cutting the upper edge of the window and another plane from the same point cutting the lower edge of the visible sky surface-should not be less than five degrees, which is best effected by extending the windows as nearly as possible to the ceiling. This and other arbitrary standards of illumination demand wide modification, because they take into consideration direct light only without reference to the factor of reflected light from any source.

The most rational illumination standard is the actual measurement of light by the illuminometer at each desk. The illuminometer reading at each desk should not be less than ten foot-candles under all conditions.

Not only is an abundance of light necessary, but it must be admitted from the proper direction if the maximum effect is to be secured with the least discomfort

9

to the eye. Unilateral window arrangement to the left of the pupils is generally adopted in this country. Frequently the shadow of a very stout child seated between the window and the desk occupied by a child who is much smaller reduces the illumination of the latter's desk. In addition to this objection, whenever unilateral illumination is practiced the desks immediately adjacent to the windows frequently receive illumination of too great intensity, which is hard to regulate without throwing a part of the classroom in shadow. Two-sided classroom illumination, with windows on the left and in rear of the pupils, is to be preferred. The only reasonable objection to this arrangement is the annoying effect on the teacher, who is seated facing the rear windows. There is no valid reason for this location of the teacher's desk, and the disadvantage is readily obviated by placing the teacher's desk diagonally across the left hand front corner of the classroom.

The illumination of the classroom is frequently defective, because measures have not been taken to secure a maximum diffusion of light. The diffusion of light depends upon the fact that all materials affect light and under varying conditions scatter it to a greater or lesser degree.

Glare is observed when light rays are nearly parallel to the eye level. Therefore, light sources situated above this level are more likely to be free from glare. For this reason the lower edge of the classroom windows should be well above the visual level of the seated pupils.

Certain polished surfaces, largely through their color, reflect a dangerous For this reason the side walls of glare. the schoolroom should have a mat surface free from gloss. In the case of the ceilings, however, no such objections exist, because the light reflected from them is at the greatest possible angle to the visual level and is not likely to produce a Classroom walls should be colglare. ored in a manner to obtain reflection with a maximum of diffusion-shades of the primary colors, yellow and green, are to be selected, because they not only have a high reflection coefficient, but also absorb other rays, not concerned in illumination, which may be injurious to the sight.

The regulation of intensity of light should receive careful attention. The most effective means for such regulation is the use of translucent window shades backed by an opaque shade to shut out direct sunlight. The shade fixtures would be of a type to permit the adjustment of the shades from either the top or the bottom of the window.

HEATING.

Under the conditions ordinarily encountered in rural schoolhouse construction the problems of heating and ventilation are so closely allied that they must be considered together. This is due to the necessity of warming the fresh air introduced into the classrooms in cold weather to replace that removed in the course of ventilation. Under ordinary circumstances a stove is the only heating apparatus available for the rural schoolhouse, and from an economic standpoint this is the most effective method for warming a schoolroom, since the modern base-burner stove utilizes seventy or eighty per cent. of the fuel value of coal. There are many defects in the heating with a closed stove, and an attempt to overcome these defects has been made in adapting the jacketed stove. In such a heating apparatus the stove is surrounded by a sheet-iron jacket with a fresh air intake at the bottom which penetrates the wall of the building. Connected with the stovepipe is a perpendicular foul air outlet with an opening at the base, through which the foul air from the lower part of the room is carried out. This outfit serves both as a heating and ventilating apparatus and should provide sufficient change of air.

The measure of sufficient change of air is somewhat indefinite, but an arbitrary standard has been accepted which requires fresh air to be supplied in volume sufficient to keep the amount of carbon dioxide down to not more than six parts in ten thousand. Various States have different requirements in regard to the amount of air each pupil should receive per minute. These average about thirty cubic feet per minute or 1,800 cubic feet per hour. The number of air changes necessary to supply this amount depends upon the cubic capacity of the classroom and the number of pupils. The cubic space allowed each child should be large enough to demand not more than six changes of air per hour in order to avoid drafts, and it may be stated that 225 cubic feet of space and twenty square feet of floor space should be allotted to each child.

BLACKBOARDS.

Blackboards are an essential for classroom instruction and careful attention should be given to their construction, with consideration as to their distance from the floor level and their location in relation to the windows.

The use of wood can no longer be tolerated as blackboard material. The surface of such boards soon acquires a polish which causes a glare that interferes with vision. Composition blackboards are now on the market, which give good service for a short time. Most of these, however, have no great lasting qualities and soon acquire a roughened surface which interferes with writing and vision. In the end the cheapest blackboard material is slate. To meet the requirements of an ideal blackboard. however, slate must present a black surface and not the usual gray of the cheaper slate. It has been stated that a classroom cannot have too much blackboard space. This statement demands qualification, because it was evidently made without due regard to classroom illumination. Where the demands for large blackboard surfaces are imperative, blackboards may be provided with curtains of light color, by which they may be covered when not in use and thereby obviate the absorption of light by the dark surface.

The location of blackboards is of the utmost importance. They should never be placed between windows nor in obscure parts of the classroom. The best location for blackboards is on the front wall. This space may be supplemented by utilizing the right hand wall if left sided illumination is adopted. In both of these locations the blackboards receive good light and are visible without discomfort to the entire class.

The pupils may be protected to a large extent from chalk dust by the installation of shallow troughs from three to four inches wide, which are placed at the bottom of the blackboards and covered by detachable wire screen of coarse mesh. This arrangement protects the fingers, crayons and erasers from the accumulation of powdered chalk. Dust from this source is irritating to the respiratory mucous membrane. The troughs should receive daily attention and be emptied after school hours.

COATROOMS.

No single feature of rural schoolhouse construction has been so consistently neglected as the proper accommodations for the care of wraps and other articles of extra clothing of the school children. The coatrooms in the country schools should provide ample space for drying wraps.

The most suitable location for a coatroom is open to much argument. Just why the coatroom should open into the classroom, as has been advocated by some, is not apparent, and furthermore there is but little to commend the practice of ventilating the classroom through the coatroom by an outlet placed in the lower part of the communicating door. In general, the coatroom should be easily accessible with an outside exposure to insure the admission of sunlight and window ventilation.

The width usually advised for coatrooms is four feet, with fifty linear feet of wall space for each twenty-five pupils. Suitable pegs or hooks should be provided and located on the walls at various levels for the accommodation of children of different heights. Racks or frames for drying moist clothing are rarely seen, but are a most valuable species of furniture in the coatroom.

The addition to the schoolhouse of a room that will be available as a meeting place for people of the community is an innovation that cannot be too highly commended. Finally, both the auditorium and the surroundings of the schoolhouse should receive careful attention. Flowers and shrubbery should be set out and placed under the care of the pupils.



MODEL FLOOR PLAN FOR SMALL SCHOOLHOUSE OF TWO ROOMS.

COMMUNITY COURTS for FACTORY WORKERS



CHARLES ALMA BYERS

HERETOFORE the community court idea has been utilized principally for the improvement of city real estate for income purposes. In the West, particularly, community courts have become very popular and as investments have proved both invariably safe and quite lucrative. Designed to serve as a sort of substitute for apartment houses and flat buildings of the ordinary kind, they are often spaciously planned and artistically executed, with effective landscape gardening, especially when located in districts where high rental charges can be made.

The idea has also been adopted, to some extent, as a method of property improvement in districts restricted to the homes of industrial workers. However, as yet, the courts so located are usually owned by individual investors, and here, too, they commonly yield a very satisfactory revenue. Hence, proving profitable when utilized as a purely investment proposition, the idea should also appeal to large manufacturers and other industrial companies which find it necessary to provide housing facilities for their numerous workers. The plan has the advantage of conserving ground space; and, when properly employed, it means, as compared with the usual factory settlement creation, a much more livable type of home, both in interior conveniences and in outward appearance.

Briefly, the community court—sometimes called a "bungalow court," because of the style of its houses—consists of a number of small individual homes grouped about a sort of common parking scheme. The houses, containing all the way from three to six rooms each, are in most cases only a single story in height, although occasionally some of them will possess upstairs sleeping rooms; and, while each unit usually comprises a single home, sometimes one or more of the houses of a certain court will be composed of two apartments, each, of course, with its own separate entrance. In some arrangements each unit will be of more or less different architectural style, while in others the style of all will be quite identical.

Through the centre of the space allotted to the court invariably runs a cement or brick paved walk, and in some instances an automobile driveway, toward which the several houses are planned to face. The grounds should be, and usually are, attractively laid out, with small lawns and a garden-like planting of flowers and shrubbery and perhaps a few The garden work is naturally trees. planned at the time the court is being designed and constructed, and not infrequently is kept in order thereafter by the owner's privately employed attendant. It is largely due to the attention given to the matter of garden planning and upkeep that the community court is made commendable and inviting to tenants. Then, too, its houses are more or less closed off from the public street, and hence there is provided greater safety for the play of small children.

The proper employment of the idea also means that the houses themselves, while perhaps small, should be fairly substantial and warmly constructed; and, of course, conveniently and cosily planned and finished inside. In fact, in the latter respect, they usually constitute veritable gems, especially in the way of built-in features, such, for instance, as window seats, bookcases, china closets.



FIG. 1. EIGHT HOUSES ON A PLOT 60 BY 100 FEET.



FIG. 2. SEVEN HOUSES ON A PLOT 50 BY 150 FEET.

kitchen cupboards, and so forth, as well as perhaps a fireplace. Moreover, the houses are often maintained completely furnished by the owner, in which cases the interior is naturally considerably enhanced in appearance by the furniture having been specially selected to match the finish. This plan is considered necessary, of course, when the court is intended to directly compete against furnished apartment houses.

As showing some of the possibilities of the community court idea, particularly in its application to industrial settlements, the accompanying illustrations should be referred to. All of these courts are of the inexpensive kind, and yet the homes they provide are attractive and comfortable. The manner in which they conservatively utilize their respective ground plots should also be observed.

The first of the courts here shown (Fig. 1) occupies a city lot of sixty feet frontage and one hundred and twenty feet depth, and contains a total of eight individual houses, or four on each side of the walk that pierces the centre. Each house is an exact duplicate of the others in architectural style, size and finish, and contains living room, dining room, kitchen, bathroom and one bedroom. The outside walls are covered with plain siding, painted a light gray, while the trimming is done in white; the roof covering is of a gray roofing composition, and the porch masonry, including the flooring, is of cement. The interior finish is in pine, the woodwork of the living room and dining room being stained a fumed-oak color and that of the remaining rooms painted white. Of the two principal rooms the walls are papered and the floors are of oak. The living room of each contains a built-in bookcase and a window seat; the dining room has a built-in combination of sideboard and china closets; the kitchen possesses a hot-water heater, cupboards and other usual conveniences, and a closet is a feature of the bedroom. The houses are heated in winter by gas radiators. Including its proportion of the original garden work, the construction cost of each house was approximately \$1.200.

The second court here illustrated (Fig.

2) makes use of a plot fifty feet wide and one hundred and fifty feet deep and consists of seven separate cottagesthree on each side of the centre walk and one facing the centre at the rear. Here again the houses are identical in size. style and finish, except that the two next the street and the one in the rear possess a large outside chimney. Suggesting the Colonial style, the sided walls, as well as the trim, are painted white, and the shingled roof is painted a bright green, while all masonry work consists of white cement. In each, the rooms are living room, dining room, kitchen, bathroom and one bedroom; although the living room is equipped with a disappearing bed, that makes it serviceable as a sleeping room also. The woodwork is finished in white throughout, enamel being used for the bathroom and kitchen, and the floors of the living room and dining room are of oak. Three of the houses have large fireplaces in the living room, and in the other four this room has a gas grate, designed in fireplace The cost per unit in this case, instyle. cluding the work on the grounds, was about \$1,100, when built a few years ago.

The third illustration (Fig. 3) shows a court that also contains seven individual houses; but here the arrangement is more compact, the size of the lot being but fifty feet frontage and one hundred and twenty feet depth. The houses are of the bungalow type, and therefore of somewhat rustic outside appearance. The walls are sided with rustic redwood. which, together with the exposed framing timbers, are stained a rich brown color; and the masonry work, save for the cement-paved walks and the cement flooring of the porches, consists of brick, while the roofing is of gray composition. In these houses the living room and dining room are combined into one; and the other rooms are kitchen, bathroom and a bedroom. The combination room is finished in pine stained a dark Mission oak color; while the flooring is of oak. and the woodwork elsewhere is finished in white enamel. The houses are heated by gas radiators. The cost of each, including its proportion of the garden work, was a little less than \$1,000.



FIG. 3. SEVEN HOUSES ON A PLOT 50 BY 120 FEET.



FIG. 4. EIGHT HOUSES ON A PLOT 60 BY 160 FEET.



FIG. 5. FOUR SINGLE HOUSES AND ONE TWO-STORY DOUBLE HOUSE ON A PLOT 60 BY 140 FEET.



FIG. 6. THIS COURT, COMPRISING THREE ROWS OF HOUSES AND ACCOMMODATING SIXTEEN FAMILIES, IS 80 BY 160 FEET.

The court shown in the fourth illustration (Fig. 4) utilizes a plot of sixty feet frontage and one hundred and sixty feet depth and contains a total of eight separate homes. Three of the houses on either side of the centre walk are but one story high and correspond one with the others in architectural style; but the two in the extreme rear, each identical with the other, possess second-floor rooms Both the walls and the roof of also. each are shingled and painted a light gray, while the trimming is done in white; and the masonry work, which includes a large outside chimney for each of the eight houses, consists of cement for the steps and the paving and dark red brick elsewhere. Each of the onestory houses contains living room, dining room, kitchen, bathroom and a bedroom; while the two two-story houses have living room, dining room and kitchen on the first floor and two bedrooms and a bathroom on the second floor. The woodwork throughout is enameled, to produce a Colonial effect, and the fireplace in each of the living rooms is of brick. Hardwood floors prevail in the living room and dining room, and the fireplaces are supplemented in winter by gas radiators. The average cost per unit, including the original garden work, was about \$1,600.

The fifth illustration (Fig. 5) shows a court consisting of four single onestory bungalows and a double two-story house, the latter facing the court space from the rear. The walls of all are shingled, the shingles being stained a dark green shade, and the trimming about the doors and windows is done in white. The roof covering is of gray composition, and the masonry work, save for the brick used as a coping of the en-The trance-porch walls, is of cement. single bungalows contain the usual four rooms each, and each half of the twostory house possesses an additional bedroom. The living rooms and dining rooms are finished in a stained-pine imitation of fumed oak; while their floors are of oak and the pine woodwork elsewhere is enameled. The heat is supplied by gas radiators. This court occupies a plot of sixty feet frontage and one hun-

dred and forty feet depth, and the construction cost per apartment, with garden work, amounted to approximately \$1,700.

In the last illustration (Fig. 6) is shown a community court of somewhat unusual arrangement, in that it is designed with three rows of houses instead The outside row on either side of two. is composed of one single and one double bungalow; and comprising the centre row are three double ones, while the two two-story houses in the rear also consist of two apartments each. Therefore, the court provides a total of sixteen apartment homes, each with its own private entrance; yet the space occupied by it is but eighty feet wide by one hundred and sixty feet in depth, or equivalent to two forty-foot lots. Each apartment, with the exception that those of the two-story houses in the rear possess an additional sleeping room on the ground floor, is composed of a combined living room and dining room, a kitchen, one bedroom and the bathroom. Several of them have open fireplaces in the living room and the others have gas grates for heating. The combined living room and dining room in each instance has its pine woodwork stained a soft olive-green tint, and elsewhere the woodwork is enameled white. The average cost of each apartment, including its proportion of the garden work, was but \$900, when built a few years ago.

All of the community courts here illustrated are located in California, and, as will perhaps be evident, are intended to provide homes that may be cheaply rented to working people. The houses are conveniently and cosily planned inside, invariably including an interesting and serviceable assortment of built-in features; and that they are attractive in outside appearance, in respect to architecture and garden setting, is made plain by the pictures. It may be also stated that some of the houses of the courts are for rent completely furnished, which has added but slightly to the investment represented by each apartment. And while these particular courts are owned by individual investors, it, nevertheless, must be apparent that the idea is equally adaptable for use in factory settlements.



WAR BOOKS OF THE CATHEDRALS By BARR FERREE

O one thinks longer of Verdun as a cathedral city. Yet the cathedral **L N** of Verdun is the dominating building of the heroic city. Consecrated in 1147, it was much changed in the fourteenth century and especially after a fire in 1755, one of the towers having been rebuilt after that date. The plan is unusual for a French church, consisting of double transepts and including a cloister. At one time it had four towers, two east and two west; those of the west end alone remain. The cathedral has been greatly damaged in the siege. Fortunately, a very competent account of it was published in 1909 by the Abbé Ch. Aimond: La Cathédrale de Verdun (Nancy). It is a scholarly book, reviewing the history of the cathedral and describing it in a modern way, and is abundantly illustrated. A much older book, with chapters on the cathedral and dealing particularly with the bishops, is the Histoire Ecclésiastique et Civile de Verdun by N. Roussel (Bar-le-Duc, 1863, 2 vols). Le Pays Verdunois, by Léon Bigot (Verdun, 1903), is a summary guide to the city.

The architectural literature of Verdun

is far from rich, but a whole library of new books have been issued within the last year dealing with the great siege of 1916. It is but fair to say that the architectural interest of these books is quite negligible. The cathedral of Verdun possesses no interest comparable with the great church at Reims that has made it the chief point of interest in the bombardment of that city. Nor have its injuries been so great as to call for protest from the civilized world. It is not the buildings of Verdun, ruined as many of them now are, that excite interest, but Verdun itself, its colossal siege, its heroic resistance. Verdun now stands for something that, prior to February, 1916, did not exist in the world. Its soil has become sacred, its buildings and forts consecrated and its most insignificant stones are symbols of glory. Anything relating to Verdun is of interest, although not every book published on it has value.

They come thick and fast. Participants in the great conflict have had time to write out their experiences; observers have found material from which to draw more or less coherent narratives. As a work of literature no book on Verdun equals Les derniers Jours du Fort de Vaux, by Capt. Henry Bordeaux. It is a magnificent and moving account of the tragic days at Fort Vaux from March 9 to June 7, 1916. One could not, indeed, write tamely of the events transpiring in this outpost of Verdun; for Capt. Bordeaux's book not only deals with thrilling events, but is written in a fine literary style that makes it a work of literature as well as of truthful history. It has been translated into English and has been continued in a second volume, La Chanson de Vaux-Douaumont: les Captifs délivrés.

A useful account of the whole siege down to December 15, 1916, is contained in L'Epopée de Verdun by Gaston Jollivet. The author cites many contemporary accounts that originally appeared in the Paris newspapers; but it is well to have these in permanent form, and they have been woven into a continuous narrative that is both comprehensive and thorough. Much briefer, because dealing with a lesser period, is L'Attaque sur Verdun, by Commandant Bouvier de Lamotte. It is confined to the events between February 20 and March 16, 1916, and thus deals with the opening of the siege. The author presents a detailed account of all the military operations and illustrates his text with many maps. Another book that may be bracketed with these is La Bataille de Verdun, by Henry Dugard. He covers the time from February 21 to May 7, 1916. He quotes largely from participants and gives many separate chapters on special incidents, thus making his book especially helpful to any one wishing to know the particulars concerned with special events and localities.

Quite in a class of its own is *Ceux de Verdun*, by Lieutenant Péricard. The author's aim is to describe the state of mind of the poilus. No one can question his sincerity or his success; yet it is a most painful book. The horrible details of soldier life at Verdun are revealed without reservation. The book fairly drips horror and blood. No book thus far published so completely reveals the dreadfulness of modern warfare as practiced at Verdun. It is an unpleasant book to read, yet necessary to anyone who would understand what has been transpiring before Verdun.

Colossal heroism-the words do not exaggerate-is described in the section of Avec les "Diables Bleus," dealing with Fort Vaux, by the Chaplain of the Battalion de Chasseurs à Pied. A very brief account it is true, but a marvelous picture of French heroism. In striking contrast to these books, which even in times of dreadful trial are filled with French hope and faith, is the picture of the German state of mind shown by Sous-Lieutenant Louis Madelin in his book L'Aveu. La Bataille de Verdun et l'Opinion Allemande. The author gives many letters and notes taken from German prisoners or found on German bodies, reproducing many in facsimile. They deal with the early days of the siege, the first two or three months, and even at that time show great discouragement among the invaders.

Sous Verdun, by Maurice Genevoix, treats of the period August to October, 1914, and is thus concerned with the early days of the Great War. It has been translated under the title of 'Neath Verdun and contains little as to Verdun. Verdun, published as a "brochure populaire" by André Vervoort, is a brief and useful chronology of the siege. L'Enigme de Verdun, by C.-Henry d'Estre, is an essay on the causes and genesis of the battle. Aux Héros de Verdun, by the Abbé Thellier de Poncheville, is a series of addresses based on events at Verdun. Verdun, Ville Immortelle, by Charles Guyon, is an account of the siege prepared for children. Of the books of poems, inspired by Verdun, mention may be made of Ceux de Verdun, by André Suarès.

But of all the books on Verdun the most interesting contains no text whatsoever. Such is the album of sketches by Lucien Jonas, entitled *Verdun: Mars-Avril, 1916.* The book has been issued in a form that perhaps only a Frenchman would have thought of, having the outward appearance of an artist's sketch book, held by a rubber band, and provided with a pencil holder. It has been published in two forms: one in black and white, the other colored by hand; in the latter instance it is, of course, a perfect facsimile of a sketch book. There are many views of places in and around Verdun and numerous portraits of officers. The latter are perhaps rather too predominating; but after all it has been the men who have held Verdun, and one cannot but be grateful for these personal souvenirs.

Another deeply interesting book of illustrations is Verdun: Images de Guerre by John Grand-Carteret. It contains 350 cartoons taken from French allied, neutral and enemy sources, and is a remarkable survey of the immense wealth of caricature that has centered in Verdun. The author has made two other collections of a similar kind, Kaiser Kronprinz & Cie and La Kultur et ses hauts faits, the three books presenting a most remarkable gathering of war caricatures, that rightly entitles them to a high place in the books of the war.

Verdun so completely absorbed the attention of the world in 1916 that English and American writers have given it some attention. G. H. Perris, in his Campaign of 1914 in France and Belgium, offers a chapter on Verdun in the early days of the war. Gerald Campbell, in his Verdun to the Vosges, makes some references to it, but at the time his book was written Verdun had not risen to the heights of fame to which it afterward attained. Frank H. Simonds, in his They Shall Not Pass, describes his visit to Verdun and gives an analysis of the attack and defence, which is of more than ordinary interest and value. The military books on Verdun in English are still few, for it is not known that any trained English or American observers followed the siege from beginning to end.

But if military books are scarce in our language this cannot be said of the memoirs of participants, of men serving with the Ambulance Corps or in the aviation service. Quite a number of these have appeared; they have a real and living interest. They are, however, but personal memoirs, and illustrate incidents in the siege without discussing it in its en-The tremendously interesting tirety. book entitled Friends of France, and dealing with the field service of the American Ambulance as described by its members, contains a couple of chapters on events at Verdun. The book should be read by every one interested in the war, and it is especially interesting as giving, without any intent, a remarkable picture of the heroic service done by the ambulance drivers. Henry Sheahan, who writes on Verdun in this volume, has published a book of his own, A Volunteer Poilu, a most interesting book, which gives two chapters to Verdun. Verdun again dominates Flying for France, by James R. McConnell, who was killed shortly after his book appeared. With the French Flying Corps. by Carroll Dana Winslow, relates experiences at Verdun and elsewhere.

Of strictly personal memoirs there is a tragic interest in Victor Chapman's Letters from France. A very new book of Verdun experiences is At the Front in a Flivver, by William Yorke Stevenson. In a final class must be placed books written by persons who were fortunate enough to visit Verdun during the siege. Such are The White Road to Verdun, by Kathleen Burke, and To Verdun from the Somme, by Harry E. Brittain. Fortunate folk, these, to visit so marveious a place at such a time; but beyond telling us of this rare feat they contribute little to our knowledge of Verdun.



The Wall Paper in the Jumel Mansion. In the July and August numbers of The Architectural Record two articles appeared, written by Mr. Rawson, Woodman Haddon, on the architecture of the Roger Morris House, il-

lustrated by very complete measured drawings by Mr. Joseph Pelle.

I wish to express my obligation to Mr. Haddon for setting me right as to the probable extent of the restorations made in 1810 by Stephen Jumel.

Before proceeding to the defense of the wall paper, which is my object in replying to Mr. Haddon's article, I wish to say that the house is not an American house, designed by an American architect, but a type of Georgian house well known in England, and that the plans for its construction must have been brought over from England. Some years ago I was speaking of the house to Sir Purdon Clarke, and as soon as I mentioned the great parlor at the back he interrupted me with the question, "Are the corners cut off?" I said they were, but how did he know that fact, not yet having seen the house? He replied that he had seen such houses about London. Numerous English visitors have since confirmed Sir Purdon's statement, and if a duplicate of the house exists in America I have never heard of it.

"Carpenters and joiners," as they used to be called, were very competent at the time when the house was built, and it is possible that skilled carpenters carried out the English plans without the direction of an architect; but it is evident that Stephen Jumel employed an excellent architect for the restorations he made in the house in 1810, and that whatever fine work was done then was the untrammeled work of the architect so employed. It is not likely that Jumel had any knowledge of architecture or decoration, but he had the money to pay for both and the good sense to leave such details to his trained expert.

The restoration of the paper, then, in the octagon room was evidently done under the advice of the architect, and the architect who built the beautiful doorways for Stephen Jumel did not advise the restoration of the paper because it was beautiful, for it is distinctly otherwise, but because he believed it was the original paper hung in the house when the house was built and was the paper "of the time of Washington," which was not "an in-definite time," as claimed by Mr. Haddon, but so very definite that it could only mean the thirty-one days in the year 1776 when Washington occupied the house. In 1810, when Jumel bought the house, it was but forty-five years old, and it would not have been difficult at that time to have ascertained the facts about the original paper.

Even with the rough treatment it must have been subjected to, it is not strange that the original paper had hung on the walls of the octagon room for forty-five years, when we know that the reproduction made in 1810 hung on the same walls for eighty-four years and was in good condition when removed in 1894, even improved in tone, like an old rug, by the fading of its colors.

At the time when this paper was reproduced, last year, it had been in the house for one hundred and six years.

The frieze and base borders of the paper are of a classical design, generally spoken of as "Empire," but such designs were used before the "Empire period," and even before the Adam period, and are not sufficiently "Empire" to fix the date of the original paper. The claim is made that the paper was bought by the Jumels in 1810 to match their Empire furniture, but, in the first place, it is not known that they had any Empire furniture in 1810; and, in the second place, if they had bought a new paper in 1810 it would not have been printed in squares and pasted together to make the rolls, as Miss Sanborn tells us the Colonial papers were printed and pasted before 1790.

The paper put up in 1810 was so printed and pasted. The laps are three-eighths of an inch wide and hardly noticeable until held up to the light, and these laps are as firm today as they were the day the paper was made. The mistake that I made in the second reproduction was in not requiring the Birge Company to print the paper in squares and paste them into rolls. Stephen Jumel's architect was more exact in his requirement, and the reason that the paper was printed in squares in 1810 was to make it an exact reproduction of the paper so printed in 1745, which the architect who built the beautiful doorways would be very nice about.

There is interesting evidence that the house was papered when it was built, in two doors which were concealed by the same paper as that on the walls of the rooms. The door in the rear bedroom (see Mr. Pelle's plan of second floor) opening into the side passage has broken places in the present paper, showing the unpainted pine wood. This door is an original door having two broad panels on the passage-side and is hung with H and L hinges. The second concealed door is in the "Guard Room" and has been uncovered since Mr. Pelle's plans were drawn and opens into the indicated dark space, which was a closet.

Each of these doorways is, of course, without "trim," and seems to have been so treated to preserve a proper Colonial balance of doors in each room. In the bedroom, if the papered door had been a door with a trim, it would have necessitated the making of another door on the other side of the central door, and in the "Guard Room" the position of the two doors, if both had been full doors, would have been offensive to Georgian ideas of balance.

Until 1894, when the house passed into the possession of General Earle, the wall papers in all the rooms, except in the octagon parlor, had been put on in the old style of one layer of paper over another, and it would have been possible at that time to have secured samples of the original paper in each room.

The paper hung in the octagon parlor

in 1810, as was probably the case with the original paper, was not pasted to the wall, but was hung like tapestry and was removed in 1894 and again hung free from the wall in another room. For three years after the city of New York bought the house a single watchman was in charge and visitors carried off samples of the old paper as souvenirs until not a complete panel remained. It is to the credit of the ladies who took charg of the house in 1916 that samples of the paper were preserved under glass.

WILLIAM HENRY SHELTON.

Young Ambition's Ladder. A bright-faced young architect came recently to visit us. He was just back from certain remote and little-traveled regions whose architecture is considered by students to be highly interesting. Be-

cause he had made the pilgrimage as winner of a traveling scholarship, we, in our unsophisticated way, supposed he had chosen the land in question in order to examine its unique fusion of Eastern and Western elements. Only old-fashioned folks, as we soon learned, would have ascribed such a motive.

He had gone where he did because the countries prescribed in the terms of his scholarship were impossible places to the peaceful student in these frightful days; and having had the choice forced upon him, as it were, he determined to make the best of it by "doing a book."

Now the preliminary step in doing a book is to consult the most commercial publisher discoverable and ask him to suggest the least-worked field. He will always be found guiltless of partialities. Fusion of East and West, glory that was Greece, grandeur that was Rome—all are alike to his open mind, provided only they lend themselves to the making of a salable book. As for the predilections and enthusiasms of the architect, he must not possess such hindrances to authorship. Off for the land indicated by the publisher as not yet done!

And here was our young friend back with his spoils—some hundreds of photographs, some sketches, and a well-lettered titlepage, which announced that a distinguished American architect had contributed a short preface. Behold the book!

"Is there to be no text?" we ask.

"Text?" repeats the bookmaker. "Why, no one reads text today. Give an architect some good photos and a few measurements and he can build anything on earth. Why should he bother reading text?"

To one who writes serious architectural text this is a bit discouraging, but recalling that it is sinful to nurse wounded pride, we hazard a volley of stupid questions: Won't the architect have any curiosity about these photos and measurements you propose giving him? Won't he ask why all the houses, even the modern ones, are almost windowless? And why all, civic and domestic, are built on the same plan? And why they are flush with the street, palace and tenement alike? Won't he realize that there must be a reason for these distinctive treatments and that he ought to know that reason? And the people of whom this architecture is a perpetuated expressionwon't he wish to know their racial characteristics and the influences and ideals they came in contact with?

No, positively no! the young visitor assures us. "All that sort of thing is superfluous in *this* country (the emphasis implying that I, with my antiquated notions, must belong to the Old World). Any architectural publisher will tell you to cut out the text and give him pictures. Pictures, plans, measurements—that's all a modern architect wants."

This lighthearted contempt for information and worse still, this overfeeding ad nauseam with photos indifferently taken and cheaply reproduced, are bound to be reflected in our architecture. Perhaps, indeed, the easily obtained photos are to blame for the contempt of text. They no longer illustrate a point, they are the point; they are not a means to an end, they are The architect spreads out his the end. manifold photographs, cribs a motif here and there, and puts up a building; then he takes its photo for reproduction in some architectural monthly where it serves both as advertisement of his genius and as inspiration for another looking for the easiest solution of his own problem. And that's the end of it! To this has the noble art of design descended.

Time was when the dedication of one's life to architecture presupposed an enthusiasm for what was or had been glorious and beautiful. The student knew that his subject was a record of the social and religious habits of various races and that it was intimately connected with their arts, their commerce, and their politics, and accordingly he expected to inform himself in just measure on those topics. Furthermore, he expected in due time to reflect contemporaneous life and conditions in his own work. What richness in this program, compared with that of the jaded "photo and a few measurements" type! The royal road to architecture with a vengeance!

How could any school, even a correspondence school, turn out this attitude of mind? How could any student to whom it has been pointed out that buildings, even in those periods known as revivals, are the outcome of social, historic, and geographical conditions—how could he smother the curiosity that would naturally arise as to these conditions the moment he first sees any given phase of the world's architecture? How could the mere set of photos (never forgetting the few measurements) satisfy this normal human inquisitiveness?

In the days before the snapshot was invented Filippo Brunelleschi set out from Florence for Rome. Not having consulted an enterprising publisher as to doing a book he had to support himself during his four years' sojourn in the Holy City as a goldsmith; but every spare moment of the four years was given, we are told by Vasari, to the most ardent study of the Roman monuments, in order to grasp the principles of the classic styles. Both in his day and centuries after, Brunelleschi was for counted a genius. Even Michelangelo was glad to study him. But what a poor pygmy he must shrink to now beside the modern youth who, from copious photos and a few measurements, can master and apply what it took the Florentine four years of ardent study to absorb!

Our own Thomas Jefferson, who was no mean builder in his day, said: "Architecture is a noble art and worth great attention"; and when he got to Nimes, where he could at last stand face to face with an entire classic building, he wrote that he was spending days and days gazing upon the little Roman temple there, "like an enchanted lover gazing at his lady." Poor simple Thomas, wasting hours and giving way to childish enthusiasms! Better a few quick sketches, a few measurements, and back post-haste to Virginia to design and build Monticello, Farmington, and the noble University!

It goes without saying that the student who is willing and even eager to eliminate so much in his own art eliminates even more of everything else. The men of general culture in the profession are few and steadily decreasing, in spite of our young visitor's assurance, given in all sincerity, that our American architects are better educated in every way than either the French or the English. When we contested the point and talked of that most admirable and practical architect, George Street, who, according to his biographer, Georgiana King,* went wide and deep in the subjects he had at heart, who mastered and spoke, besides French and German, both Italian and Spanish, who carried on his researches into Latin documents with ease and speed, who took in a vast deal of contemporary thinking and reading, and who wrote after many visits to Spain (not one flying trip, mind you) the best book ever written on Spanish Gothic-when we spoke of all these accomplishments of the English self-educated Street, we were told that the profession (God save the mark!) had outgrown all that sort of thing. And besides, who would think of reading Street today? Who would even buy his book, seeing that its few drawings were inadequate to the needs of the borrowing modern practitioner?

Perhaps the young man spoke truly, but it was a sad truth. It made us think of a certain wise old Scotchman whose grandson wished to enter an architect's office before completing his schooling. Getting an education, the old gentleman explained, was like making up a bed that one must sleep in later on. If the covers provided came merely to the edge of the mattress, of course one could sleep, but the cold crept in and one had an uncomfortable feeling all night long of adjusting oneself to the annoying scantiness of the bedclothes, pulling here and shifting there to fill a gap; but if, on the other hand, the covers provided were ample enough to permit of generously tucking them in under the mattress, one snuggled down with a delicious sense of adequacy and slept sound all night. Culture was to life, he said, just that extra length and breadth that gave the delicious sense of adequacy.

Of course, the modern architect argues that the complexity of life has forced more

*George Edmund Street; Unpublished Notes and Reprinted Papers, with an Essay by Georgiana G. King. Published by The Hispanic Society of America, 1916. into his everyday program than the bygone generation had to face; but it is also true that the tendency to specialization has relieved him of much that was formerly undertaken by the architect. Surveyor, engineer, decorator, blueprint maker, telephone, automobile (whether his own or his client's) are all timesavers to him. Could he not put a few of the hours saved into informing himself as to what lies back of the too numerous photographs on which he has learned to rely?

We have mentioned that a well-known architect wrote a brief preface for the book in question (which we have not yet seen) and consented to let his name appear on the title page. This gentleman never learned the fine Gothic with which his name is associated from half-tones and a few measurements. The little minster churches of England and the stately cathedrals of France must have been studied devotedly by him; and then to round out his mind and give his builded stone the true flavor he must have absorbed much else that was medieval. Does he regret all this as time lost? Would he, if he could, discard the refinement of taste which he thus got? One is almost forced to think so on seeing his name attached to the new and rapid method for which this book stands.

If volumes like this, with their indiscriminately selected views and their absence of all information historical or critical, answer the American architect's needs and can therefore be endorsed by reputable men, it simply means that architecture has become a mere matter of knowing a few things and feeling nothing. It means that the successful man is he who puts up the most buildings on the rapidly-designedfrom-photo system rather than he whose influence is all for the ennobling of the profession and the holding of high ideals before those about to enter it.

MILDRED STAPLEY.