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South Portal, Beauvais Cathedral.

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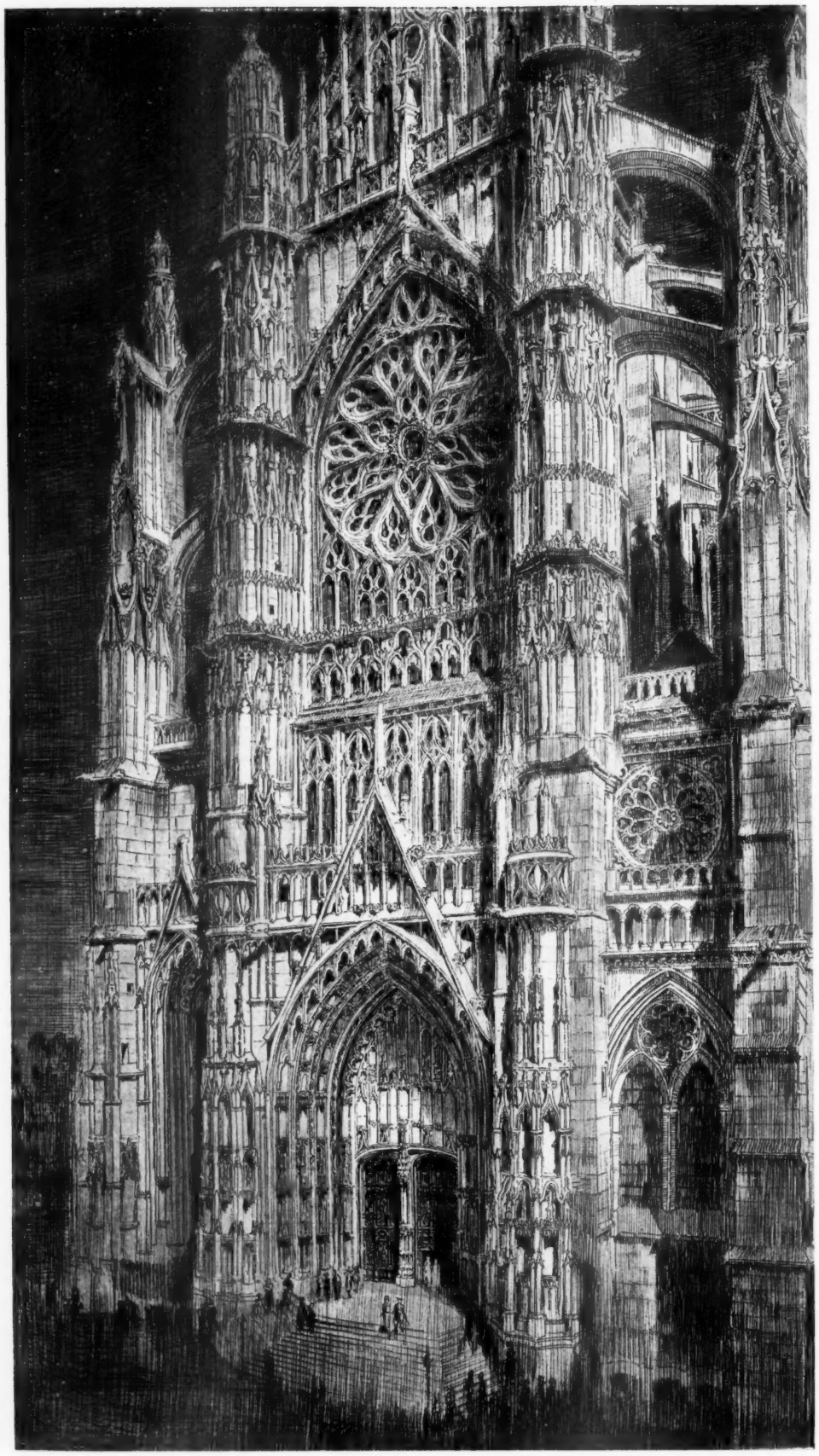


Plate I. March 1919.

BEAUVAIS CATHEDRAL: SOUTH FRONT.

From a Drawing by Captain Robert Cromie, A.R.I.B.A.

# THE GLORY OF GOTHIC: BEAUVAIS CATHEDRAL.

By CAPTAIN ROBERT CROMIE, A.R.I.B.A.

SINCE the early Christian epoch the erection of monuments for the aggrandizement of either temporal or spiritual power has always been associated with a desire to surpass precedent, very often at the expense of antecedent work, and sometimes to the extent of spoliation. When Artemius of Tralles and Isidore of Milet erected Sta. Sophia to the God of Eternal Wisdom, Justinian did not hesitate to embellish his new mosque with the spoils of old. His great object was to erect something more magnificent than the world had ever known. His palaces, amphitheatres, and thermæ obliterated the remains of the obscure Byzantium founded by a Thracian king. The heathen was subjugated to the pseudo-Christianity of emperors whose paganism was easily converted to a new creed the political possibilities of which needed no advertisement. Even Constantine's acceptance of baptismal vows possessed less altruism than statecraft, and if the cross replaced the enigmatic idol of Imperial Rome its symbolism probably indicated more of clairvoyant appreciation of earthly possibilities—a realization of the times—than of divine inspiration. One can hardly be impressed by the sudden apostasy of rulers who have nothing to lose and everything to gain by following, or leading, a popular cult. Agrippa or Nero would have built cathedrals instead of triumphant public monuments had the tendency of popular opinion demanded them. It is a question of epoch. The cycle of barbaric influence had reached its climax when the sign of the fish was inscribed by zealous trembling hands in the catacombs of St. Sebastian. The Appian Way was the true birthplace of our Gothic era. Paganism had to go, and the martyrdom of Peter and Paul, A.D. 66, marks the turning point. The temple "outside-the-walls" was erected on the site where St. Paul's head fell three times to earth. . . . The blood of the victims of Neronian nights was not spilled in vain, for the new emperor laid the first foundations of St. Peter's in 324, opening the soil, in traditional style, with his own hands. The basilica was constructed of columns and marbles filched from ancient monuments—the Forum of the Cæsars commenced its post-mortem career as a quarry dedicated to the great-great-grandfathers of the Church. This basilica, erected by Constantine, whose steps were kissed by Charlemagne, gave place to the existing cathedral, not without exciting much criticism at the demolition of a sanctuary so venerate. But mankind has ever evinced an irrepressible desire to pile stones, a desire which has always found its fullest expression in connexion with a cult the progressive expansion of which is duly reflected in the grandeur of its symbolic architecture. Ecclesiastic building has a double significance. The pagan High Priest and the Christian Pope had a twofold object in the raising of mighty tabernacles which the building of mere places of worship did not signify. Every creed realized the propagandic value of appealing to the lay mind through the senses. Every great edifice was, in a modern sense, a source of publicity. Rome owed her magnificence to the Cæsars' appreciation of this fact. The multitudes were led to a false interpretation of pomp and circumstance: an immediate visual manifestation of military power became a classic necessity. The emperors maintained their consequence by an outward show which crystallized into civic monuments and produced the architecture from which the mediæval and ogival styles were destined to spring.

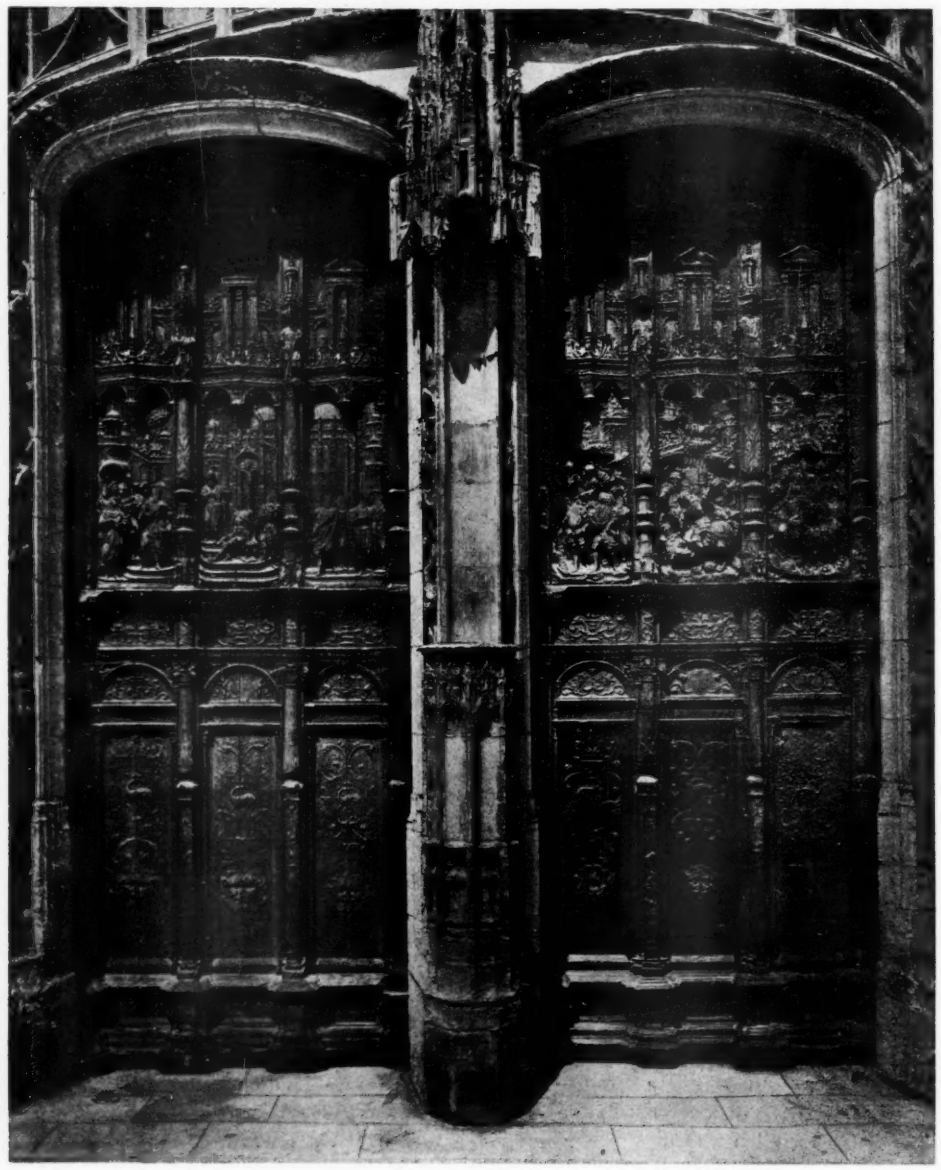
An American contemporary has made out a "case against Roman architecture" as being "pompous and without joy." However far such a contention may be pushed, it should surely be limited to the political art of Rome, and may by no means be allowed to embrace the fervent sacerdotalism of the early Christian architecture which found naissance in the temples it despoiled and which was carried far abroad by the conquerors of Gaul. The Romans did not fling their legions into Western Europe for the purpose of introducing their art; it was, however, an inevitable result of their invasion and the subsequent missions. The conquerors made their presence felt as much in the north as in the south of France by their craftsmanship; and the Gallo-Romanic basilicas, statuary, pottery, etc., imbued with a certain culture derivative of Athens and Constantinople, developed into the glory of Romanesque architecture with its characteristic ornament, to which we owe the cathedrals of France and the later translation of the Gallic styles to our own shores.

War brought in its train a devastation which in the early and middle ages cleared the way for improvement. Invasion was subsequently vindicated in reorganization and in the amalgamation of foreign with native ideas. Civil wars alone were entirely subversive. The flaming sword of a great conqueror carried with it something of the creative spirit that made its greatness, and in a ratio with the degree of civilization of the belligerents and the duration of occupation by a foreign power there has always been an interchange of ideas which in general made for progress. Saxon England profited by the Norman Conquest as much as Gaul profited by the Roman invasion. The Crusaders imbibed an Orientalism from their wars as clearly readable in our ancient stones as is the Hellenic æstheticism in Roman art. And did not Napoleon import from Egypt a mode which became a furious eclecticism that founded the Empire style? But conditions have changed. The balancing of European power, and the equilibrium existing between the civic progress of the powers lately in conflict, leaves little to be gained on either side. Spoliation for immediate gain is, it is hoped, a thing of the past. Spoliation for revenge, for political advantage, or for its own savage sake, has been, alas! abroad. To what extent will Germany benefit by her insane vandalism in France? It is a destruction of the Past . . . the age of styles is dead . . . the cathedral-building era is dead. The Spirit of Architecture has closed her wings, and sleeps. Gone is the enthusiasm that erected Notre Dame, Amiens, Beauvais, Rouen! The sacred fires that breathed life into their art are damped out in a modernism that finds no place (and no money!) for the creation of those marvellous fabrics which the wild ages have left us, and which the engines of war have laid low. Restoration is only practicable and desirable to a certain degree. Can Reims be rebuilt—or should it be? The genius of Robert de Courcy cannot be invoked, nor can Clovis come again to baptism. Amiens is wounded; Beauvais is still intact. But it is impossible adequately to protect from attack the "mother of the ogival style," and her daughters run equal risks. Their vaults are vulnerable, and maybe before long we shall have to inscribe their names upon the roll of dishonour, already so black.

Beauvais Cathedral, St. Pierre, was founded in 991 by Bishop Hervé. This early church was twice ruined by fire, and very little of it remained in 1247 when Milon de Nanteuil

recommenced its construction. Unfortunately the scientific attainments of its architects were not equal to their task, for twelve years afterwards the safety of the building was compromised—the main pillars supporting the great vault of the choir threatened to succumb to the superimposed weight of its extraordinary elevation. Enguerrand de Riche designed a grandiose plan for reconstruction in 1337, only to be again interrupted—by civil war.

Historians have never ceased to laud the cleverness which the Gothic architects exhibited in the creation of their flying arch. The cathedral nave and choir became higher and higher to such an extent that its successful manipulation became fraught with almost insuperable difficulty, and it was only at great risk that any innovation was attempted. One of the many problems with which the vault builder was confronted, and which eventually led to the perfection of the flying-buttress or "arc boutant," was the necessity of effectively carrying off the heavy amount of rain-water which the main roofs of cathedrals collected. The "butting arch," to use the descriptive French expression, was intended



DETAIL OF RENAISSANCE DOORS TO PORTAL ON SOUTH FRONT.

vaults balanced in the air on their elastic systems of thrust and counterpoise. The development of the flying buttress, which reached perfection in France in the fourteenth century, did not do so without disasters which permit critics to assume that a certain element of hazard was allowed to enter into calculations whose theories were doubtless more surely established upon past experience than upon exact mathematics. That successive architects essayed to improve upon earlier masterpieces was not merely the constructor's delight in his own skill, for changes in design were to a great extent brought about by the progressive alteration in the form of the ogival primarily to counteract the thrust of the vault ribs naturally exerted some distance below the eaves gutters. The use of the topmost arch as a water-duct necessitated vertical slots in the upper part of the walls, reaching to the eaves. This method had disadvantages, and at Amiens and Beauvais an extra flying arch was arranged to carry off the rain-water.

The struggle against constructional difficulties developed the scientific attainments of builders; its successful issue illustrates their practical genius in the progressive stages of method and design; but the use of the chisel in handicraft depicts even more clearly the degree of culture arrived at by

Plate II.

South Front.

North Front.

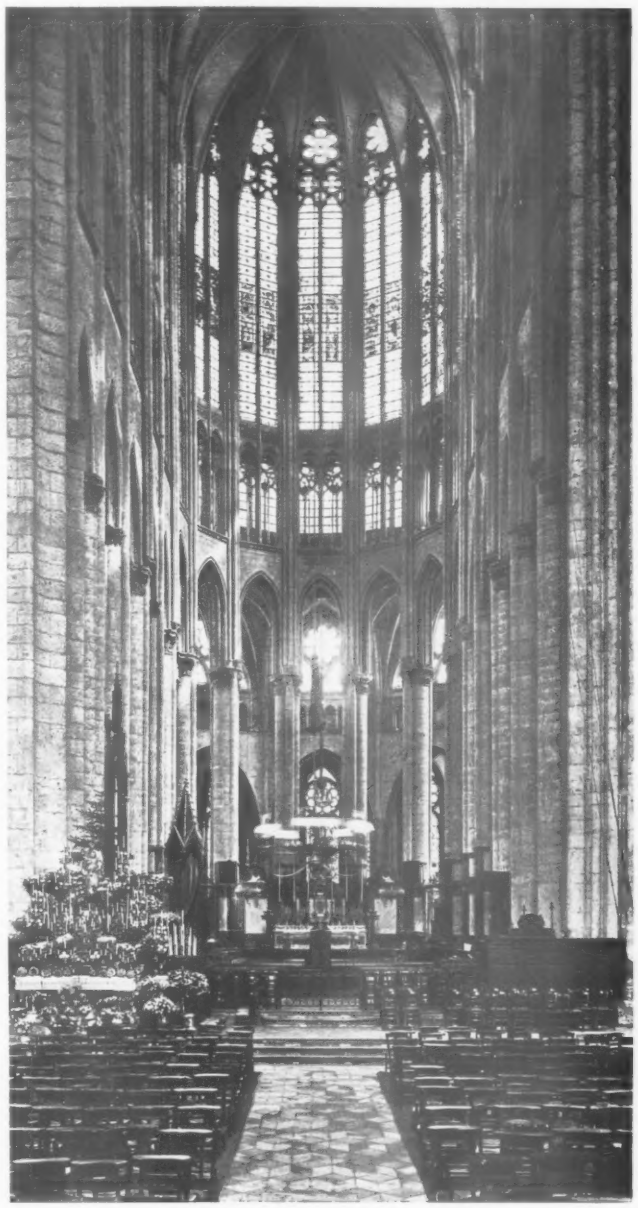
March 1919.

THE PORTALS OF BEAUVAIS CATHEDRAL.

the lay mind from the Romanesque to the Renaissance. The actual design of the ecclesiastic edifice was a monopoly of the religious orders. The monasteries directed; the cleric was the real architect, for he alone possessed the requisite learning. To the master mason and his craftsmen were left the details, and doubtless the decoration. In the sculpture and carving the lay workman plied his trade. His tutelage was not exacting. He worked chiefly at his bench, and did little carving in situ, and his fancy was evidently allowed a freedom which in our days would be denied him. To this liberty we owe the *esprit*, sometimes mundane, often fantastic, and always vibrant with the craftsman's joy seen in those thousands of carved stones which ornate our ancient monuments, and within which are enclosed so much fertility of imagination that one sometimes wonders with St. Bernard how some of them were permitted. It is interesting to note the different kinds of sculptural decoration. The symbolic or biblical designs were evidently inspired by the clergy, probably being actually drawn, if not carved, by them. The theological motif could not have been executed by the uninitiated, to whose creative instinct were probably left the running ornament, caps, ribs, and arch-moulds so profusely decorated with forms characteristic of periods and localities.

The pictorial reliefs, parabolic in conception, or descriptive of orthodox legend, occasionally tended towards "légèreté" and sometimes seem to be almost profanely comic. St. Bernard's epithet of "repulsive grotesques" was not always unmerited. The mediæval figure-carving always had a tale to tell, and its own inimitable way of telling it! Unfair analogies have sometimes been made between Gothic and Classic sculpture. One might as well compare a rose-window to a sacrificial urn. Gothic sculpture was rarely more than mere figure-carving, a masonic craft that never rose to the intellectual level of Classic art. Its idealism was humble, imbued with priest-worship. Its appeal was essentially subjective. It is beside the point to invest these carvings with a symbolism which in most cases they did not pretend to possess. The mystery of age must be separated from æsthetic intention. The Romanesque carvers were influenced by Oriental importation, and probably had little notion of the original significance of the motifs upon which their labours were so ungrudgingly bestowed. A freedom of idea was interpreted into designs untrammelled by the somewhat exotic culture of knowledge. A phantasmagoria of flora and fauna often interwoven offered a rich field to lapidarian artists whose imaginations were only hampered by the exigencies of material and local practice. These carvings are an open book to the mentality of their period.

In a broad sense originality may hardly be said to exist in the superficial decoration of Gothic buildings other than actual carving. The pointed arch was a purely mechanical development, and tracery was hardly less so. The use of the geometrical form as an applied decoration became banal in its constant recurrence, and the noble simplicity of the thirteenth century was lost in the confused ornamentation of the later styles.



THE CHOIR.

It was not until the year 1500 that Villiers de l'Isle Adam laid the foundations of the transepts of Beauvais, and the southern façade illustrated was completed by Martin Cambiche in 1537, during the reign of Francis I. The portail "St. Pierre" was completed in 1548 by Michael Layle, and had the original designs for the whole fabric been executed Beauvais Cathedral would have been the Parthenon of French architecture, according to Viollet-le-Duc.

The glory of Michelangelo, then at the zenith of his fame, excited, it is said, the jealousy of Jean Vast, the successor of Layle. The dome of St. Peter's was then the latest acquisition to the architectural world, when Vast was designing his flèche to rise 153 metres above the ground. It was erected over the transepts, before the nave was built to sustain the additional weight. This miscalculation on the part of the architect, whose trepidation exceeded his good judgment, ended in catastrophe. His wonderful flèche fell, and the shock was largely responsible for the subsidence of the choir vaulting in the fourteenth century, a menace which was counteracted by the addition of extra pillars. The fallen flèche was replaced by a clocher which was demolished during the Revolution, and the nave was never completed. Its foundations "sleep . . . beneath the flower-beds of the Palais de Justice." All that was ever constructed of this wonderful monument consists of the choir and transepts.

The arrangement of the choir with its chevet of apsidal chapels reaches the climax of the development which cathedral planning underwent since the basilica, and if the simplicity of its vaulting and mouldings gives an impression of severity, the height (48 m.) is wonderfully impressive, especially during an evening service, when the ceremonial lights and music are lost in an inverted well of shadow.

Viollet-le-Duc gives a plan of the choir in 1250 which, he says, indicates how the disposition of plans became simplified

as the ogival style followed the consequence of its principle. He refers to the striving of thirteenth-century architects after space, and the removal of obstacles that would obstruct the view, only to be obtained by diminishing the number and size of the arcaded pillars.

What would have been the ultimate development of the Gothic style had Italian influence not arrested its natural progress?

The planning in conformity with ritual had reached its culmination; constructional problems had been solved; the style had settled down definitely to type. The only important feature whose treatment still required settlement was the spire or clocher over the crossing.

The transformation of the racial French styles into a conglomerate "Italian" was brought about through the Italian wars and diplomatic missions.

Gradually Venetian and Florentine ideas penetrated the Parisian Court and impregnated the artistic mind. The cessation of Gothic as a pure style was almost abrupt. The transfusion of Italian motifs, the increased scope for originality, the extension of the field of design, new structural origins for decoration, and the battery of imported Early Renaissance ornament, soon overcame any lingering tendencies to continue the ogival styles. Architecture soon ceased to be "elastic"; there was a reversion to the static conception of construction. Gothic was a law unto itself. The Renaissance dictated an ordonnance of academic ideas in accepted proportions. In the completion of the later cathedrals the Italian method is often evident. Beauvais contains a fine pair of carved doors by Jean le Pot typical of the François I style. Their design reveals the disturbed thoughts of the transitional artist. The grip of the Gothic model had gone—compare the canopy carved in stone and the carving in the door panels. The old principles were distorted to accommodate the new, until at last, unable to keep pace with the invading art new-kindled by civic progress, they withered and died. . . .

The "white mantle of Christian basilicas" which was spread over the world in the eleventh century was quietly folded away by the cycles of Time. The new art triumphed in the Gothic Ichabod. . . . *Sic transit gloria mundi.*

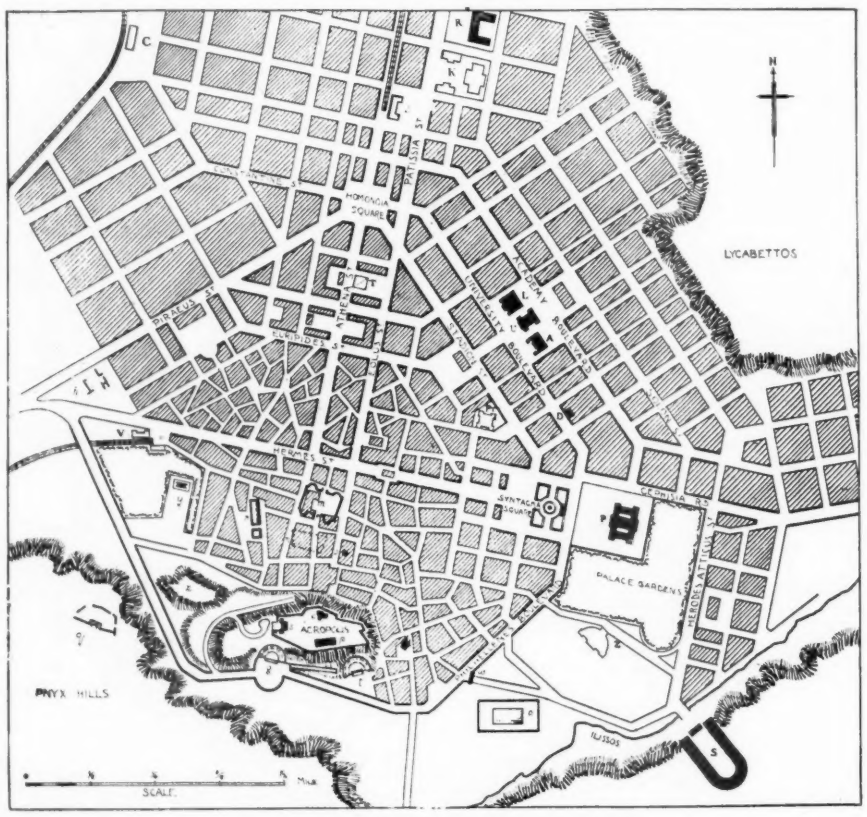
# THE REPLANNING OF ATHENS.

By THOMAS H. MAWSON

WHEN I returned from Athens and first announced to some of my journalistic friends in London that Athens was to be replanned they at once scented "copy." The daily and evening newspaper press was full of it from John o' Groat's to Land's End. The very idea of remodelling and replanning "Ancient Athens" seemed to many as out of place as the revision of the Bible did to our fathers when it was suggested.

Now, first of all as to the necessity for replanning. In former days the small population could be easily accommodated amidst its ancient and interesting surroundings. In 1830 Athens was only a poor village, with some 300 huts or tenements containing a mixed population of Greeks and Albanians, but the population began to expand. Forty-one years later (in 1871) it was 44,000, eighteen years later (1889) it was nearly 108,000. Only seven years later it had risen to 111,000, or, with the near villages, almost 129,000. To-day there are 200,000.

This expansion has meant a necessary growth in housing, which has been managed by a build-as-you-please policy that hurriedly sought to cope with merely pressing needs. Added to all this came the stream of wealthy tourists (ever increasing through the growing ease and rapidity of travel), and the cry was ever for more hotels. Shortly, there will be direct communication with Salonika; and once this is established the city of Athens will be only sixty hours from Paris. Far-sighted provision is therefore necessary for the many who regard the ancient city as a Mecca that must be visited.




SKETCH PLAN OF MODERN ATHENS.

Also it must be remembered that at the end of the late Balkan War an extensive area of new and very productive territory was added to Greece, increasing the scope of its Parliamentary representation and demanding the erection of a more imposing Government centre, with numerous Ministerial buildings.

The Municipality, anxious to express its civic pride, wished to erect a City Hall, Law Courts, and Markets, and the merchants of Athens contemplate a new Exchange. They are wise enough to see that all these buildings

must be planned as parts of a great whole, besides being independently of a monumental character. Nothing discordant can be erected in Athens.

Then there is the growing importance of the Piræus as a port for the overland traffic across the Continent; and this, with the railway extension to Salonika, will probably become the overland route to India and supplant Brindisi. So with this in view the present railway stations must be brought together on a new and economic site. Also there must be a new and well-planned system of hotels, and in this M. Venizelos takes an especial interest.

The internal life of the city needs consideration. An obvious necessity is a boulevard, park, and playground system which shall add dignity to the metropolis and match its requirements.

All these things taken together have created the need for a new Athens. Fortunately, it is the modern part of the city which needs the most drastic remodelling in order to make it what an up-to-date city ought to be. So much, then, for the imperative necessity.

My second point is that that necessity must be met—and met in a way that will conserve *all* that *Ancient* Athens meant.

It must be remembered that the ancient Greek or Hellenic civilization consisted of a number of small states or cities always more or less in rivalry—Sparta, Thebes, Athens, Troy, and others—each of which had a certain ideal and glories of its own. Moreover, each in turn sought supremacy over the others; hence there was constant war. Now, the Athenian ideal was the outcome of a deeply religious or mystic cast of thought which read into events and into all things in nature a spiritualized meaning, the foundation of which we decipher in what is called the Greek mythology. Without understanding this essential spiritual fundamental of Athenian life and thought, we may admire the grandeur of the Parthenon and the other ancient survivals; we may be moved at the sublimity


PRELIMINARY PLAN FOR THE DEVELOPMENT OF ATHENS.
By Thomas H. Mawson.

of their stately pose; we may descant upon their perfection of proportions; we may admire their unrivalled sculpture; but never, never, shall we understand their meaning. Their appeal will always be as superficial as the remark of an enthusiastic old gentleman tourist who exclaimed: "These beautiful old things!" I cannot tell how inadequate such remarks are, because the whole appeal of these buildings is not so much in their beauty of form as in their imperishable youth. They are old, but ever young. The crumbling touch of age may add a charm, but it is wholly adventitious and not intrinsic. The severe line of the column—which seems to spring as naturally from the ground as a tree—and the firm strength of the curves have nothing to do with the beauty sentiment; they pronounce the sentiment of unfailing youthfulness.

We must remember how, in their national mythology or religion, the Athenians blended their conceptions of the divine with man, with nature, and with human life and events. The same belief moulded all their schools of philosophy. Holding such an ideal, it was natural that when they wished to dedicate a place to the gods they should blend art with nature. Thus, that which nature had begun in the Acropolis Hill they simply crowned and adorned with open-air art perfectly harmonious to it. In the composition of the buildings of the Acropolis they made no attempt at balanced symmetry or alignment, the whole being built up as a composition in which nature is conductor and art is first fiddle. This was the Athenian way. The Romans acted otherwise, for art with them was both conductor and orchestra. To-day an Italian and a Frenchman must always be heroic in their design. They try to make nature bend to their will. With the ancient Greeks and with the English the case is just the reverse. With both there is the same love of liberty and hatred of oppression, the same love of healthy outdoor games, the same respectful deference towards nature's supremacy above art.

The intentional contrast of the rugged angularities of the Acropolis rock with the noble and ordered refinement of the columns and moulding of the Parthenon and neighbouring buildings, is one of the essentials of bold design. For example, Edinburgh, so often called the Modern Athens, although a blend of many styles, possesses these qualities of contrast to a remarkable degree. Note how Cockerell emphasized the value of Calton Hill by erecting the monument where it strikes the central note of the picture.

This welding together of art and nature was also, I claim, the dominating motif in much of our Gothic work. Where, indeed, could you find a nobler example of this than in Durham Cathedral as seen from the river? The orchestration of art and nature is perfect.

So also was it with Greek architecture. The builders of the Parthenon realized that the noble Acropolis Hill rising out of the plain of Attica must be the dominating factor in the composition: thus their architects first drew in the hill itself, and then began the work of suitably crowning by art that which nature had so nobly begun.

VIEW OF MODERN ATHENS FROM THE ACROPOLIS (LYCABETTOS IN THE BACKGROUND).

The Greeks unwillingly yielded up the Acropolis to their ruthless Mohammedan conquerors in the year 1456. For a period of 350 years the Turks were in undisputed possession of it, except on two occasions when they were disturbed by the Venetians. It was during the siege and recapture of the town by the Venetians in the year 1687 that a bomb fell into the Turkish powder magazine kept in the Parthenon, and reduced to the present ruined state the hitherto almost intact building. It was not until the year 1833 that the supremacy of Athens was finally wrested from the unspeakable ruthless Turk and his vandalism.

Ancient Athens is in ruins. The oldest dwelling-house in Athens was erected not more than eighty years ago, and beyond a few Byzantine churches and one or two Turkish

The Central Statio n.

Plate III.

The New Government Centre, with Parliament and Ministerial Buildings.

March 1919.

PROJECTED NEW BUILDINGS IN THE REPLANNED ATHENS.

Thomas H. Mawson, Architect.

THE NEW GOVERNMENT CENTRE, WITH PARLIAMENT AND MINISTERIAL BUILDINGS.

mosques there is no landmark between the intervening centuries when the venerable and famous buildings were erected and the present time. In 1834, when the seat of Government was transferred to Athens, it had dwindled down to a poor village of about 300 houses, with narrow crooked streets containing a mixed population of Greeks and Albanians. The present city was planned by Herr Schubert, a German architect, and, as it is, is one of the most attractive towns in the Levant, with many handsome public and private buildings—erected mostly in the last quarter of the nineteenth century.

With regard to the replanning of Athens, the need for shade is everywhere apparent; and therefore, in addition to the park and boulevard system, a comprehensive scheme of re-afforestation is taking place on the outskirts of the city. This extends over vast areas, especially on the higher ground behind the Stadium. There will be numerous small public plots, with an abundance of trees and a fountain, where workmen and others may rest in comfort during the long midday recess. There will also be a number of larger open plazas, similar to the Place de la Concorde, where, in addition to shady trees, there will be grass, bright flowers, fountains, and noble statuary.

These parks will not be detached units left to the chance charities of the rich, but will form an integral and coherent part of the city plan. Without this unity, the noblest architecture oftentimes looks commonplace.

The central and commanding position of the Royal Palace and the palace of the Crown Prince, with their spacious and magnificent gardens, strikes the visitor as the culminating feature of the park system; and it is interesting to note that not only are thousands of residents permitted to enter the Royal Gardens, but the general public are also permitted glimpses into their noble recesses.

If Athens must be replanned, on what principle will it be done? Properly understood, what we call a town-planning scheme is first of all a policy for controlling public expenditure in the interests of the community. It recognizes that growth is the law of cities as of individuals, and seeks to control this growth on financial and economic principles. It endeavours to secure the greatest efficiency in every department of Government, civic, commercial, and industrial centres, and it also seeks to conserve every ounce of energy which the worker has at his command. It may be added that a city which first aims at efficiency will become beautiful in proportion as it succeeds in being efficient. The town planner in Athens is encouraged because he has to deal with the Greek temperament, which aims at logical sequence and directness. If by accident he had to deal with Englishmen he would meet with the greatest opposition, for with us directness is not a quality, but a blemish.

PRELIMINARY STUDY FOR CENTRAL PART OF THE NEW PLAN FOR ATHENS.

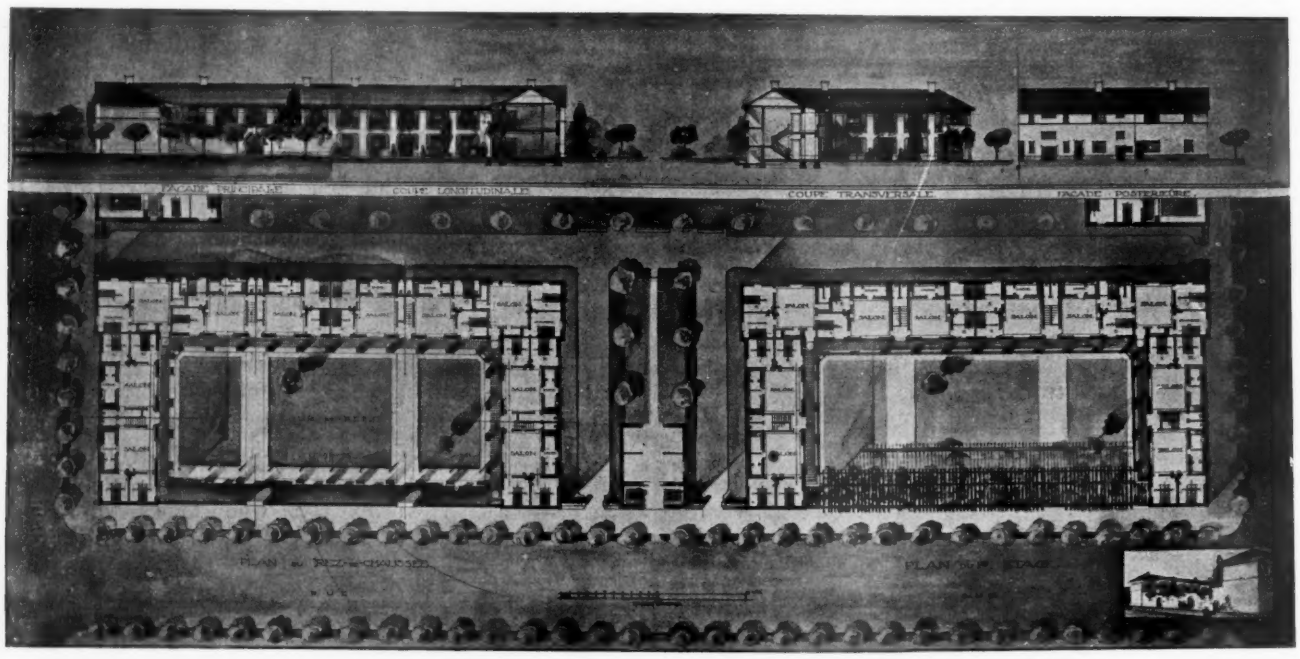
In the replanned Athens all the trunk and local railways are brought to one strategic centre, thus ensuring economy of working and permitting of a plan in the grand or heroic manner. Workshops and factories which at present are scattered all over the city are brought in relation to the railway sidings, thus saving the cost of haulage and also of road maintenance charges. Bonded warehouses and wholesale markets are also in relation to railways.

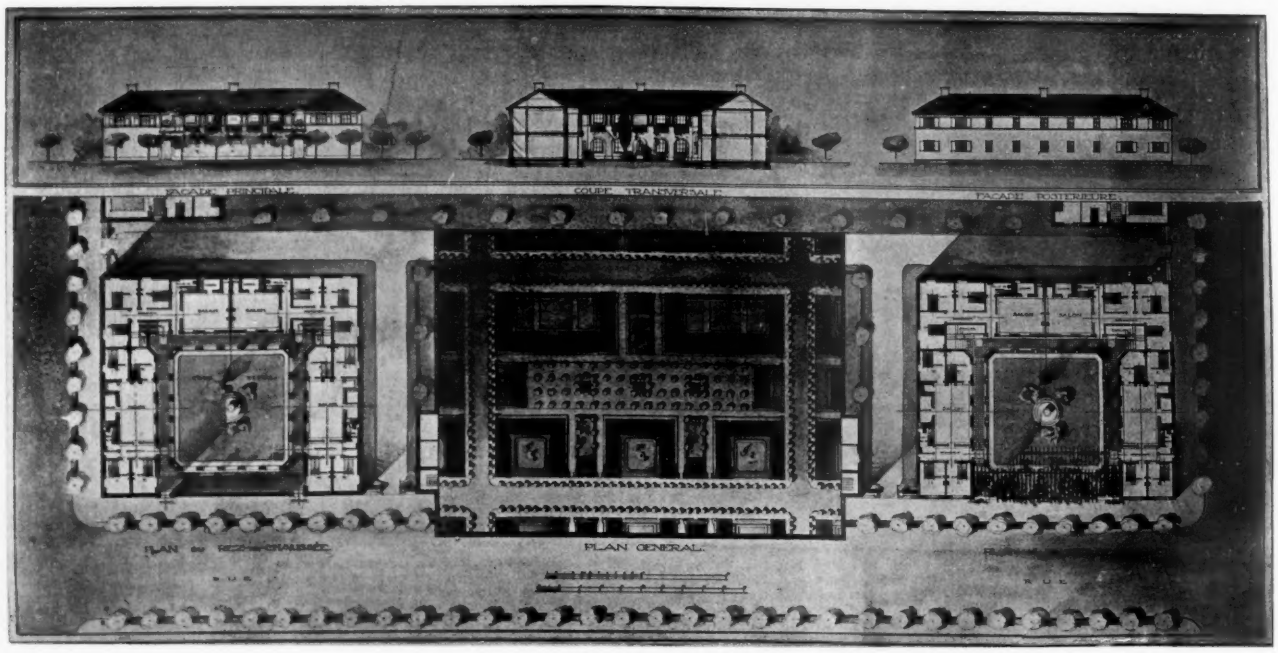
Areas devoted to working classes are convenient to centres of population. The civic centre is convenient to the Government centre, and the latter is convenient to Royal residences and embassies. The academic centre is connected by great diagonal boulevards to the railway centre. A corresponding diagonal road connects the railway centre with the shopping centre, the retail markets, and the principal approach to the Acropolis.

The site of ancient remains, from which every defiling structure, whether slum or hovel, is to be removed, is conveniently connected with every part of the city.

The new residential areas, including workmen's areas, provide for an additional population of nearly 200,000.

How is this vast scheme to be paid for? I answer, by the Athenian people. Quite frankly, if Athens were as rich as one of our Lancashire towns I would utterly despair of Athenians accomplishing anything; but because they are poor, and have necessarily to practise rigid economy, they will accomplish all I have suggested, and more; for they will first solve the practical problems of design on paper in a true scientific and æsthetic manner, and then, if necessary, take fifty or a hundred years to accomplish their object! In Athens, the prime mover in the replanning of the city is M. Venizelos, the deservedly popular premier.






DESIGNS FOR WORKING-CLASS HOUSES, ATHENS.
Thomas H. Mawson, Architect.

# THE CAREER OF ALEXIS DE CHATEAUNEUF.

THE first volume of the "Transactions of the Royal Institute of British Architects," published in 1836, contains two lithographed sheets giving the autograph signatures of the honorary and corresponding members of that period. The list is headed by Percier and Fontaine, it includes the names of Schinkel, Leo von Klenze, Alexis Chateauneuf, Bruloff of St. Petersburg, and Ithiel Town of New York; with many others, making a total of thirty architects whose works to-day are renowned.

From among this list of names that of Chateauneuf is interesting as an exponent of Classic as it was understood nearly eighty years ago; and more particularly because a study of this architect's works proves how deep-seated the Classic form of expression is. Chateauneuf's autograph signature, evidently sent in answer to a request made by Thomas Donaldson, is in the form of a brief note:—

"Hamburg.

I am, with much esteem and consideration,
My dear Sir,
Very faithfully yours,
A. D. CHATEAUNEUF."

For other particulars of this architect's career we can refer to a brief memoir read at an ordinary general meeting of the Royal Institute of British Architects by Charles Fowler, junior, in 1857, or turn to Chateauneuf's own publications.

Alexis de Chateauneuf was of French extraction; he was born on 18 February 1799 at Hamburg, where his father, one of the old French nobility, had taken shelter at the Revolution and married a German lady. After completing his school education the son desired to become an architect, and at his own request was afforded an opportunity of learning the practical side of his future profession in the workshop of a builder, while he devoted his spare time to the study of mathematics. At the age of seventeen he entered the office of the Town Architect at Hamburg, M. Wimmel, and a year later went to Paris to pursue his studies at the Academy; but, finding that the advantages he expected were not forthcoming, he left Paris for Carlsruhe and for three years studied in the atelier of the Oberbaurath Weinbrenner. This grounding in the elementary knowledge of architecture was not sufficient to satisfy the young architect's ambitious mind, and in 1821 he began a lengthy tour through the south of Germany and Austria to Italy; devoting his attention to the ruins of antiquity and finally reaching Rome, where he remained for a year.

In 1823 Chateauneuf, full of enthusiasm for the architecture of the past and burning to apply the lesson he had gleaned in Italy, returned to Hamburg and began his professional career by carrying out the town residences of Syndic Sieveking, and of his brother the senator, besides minor works. He also appears to have spent a considerable time carefully studying the local tradition at the neighbouring Hanse town, Lübeck.

Five years later, in 1828, he visited England and France, besides completing a tour through Germany. On his return he carried out the Town Post Office at Hamburg, the country seat of the Syndic Sieveking, and other works. Then followed a series of minor buildings remarkable for originality in construction. Early in the year 1832 he again visited Italy to refresh his impression of Italian architecture, and returning to Hamburg designed the residence of Dr. Abendroth, a local connoisseur and patron of the arts. This building, both as regards the effective adjustment of the plan to an irregular site, and the exquisite taste displayed in combining the purity of Greek detail with the structural motifs of the Italian Renaissance, affords material for reflection.

Chateauneuf's own description of the building reads: "The house of Dr. Augustus Abendroth was begun in 1832, and received the family in 1836. It forms the corner of a side street of the New Jungfernsteig at Hamburg, and is overlooked from the distant, and in parts much higher, banks of the Alster. It was, therefore, requisite to take care that the mass of the building should not be kept down by smaller neighbouring houses. To effect this I adopted the mode often occurring in the palaces of Florence, namely, to make the roof to decline towards the back, which was the more appropriate here because the irregularity of the foundation did not admit of giving any pleasing lines to the roof. The arrangement of this house as the residence of a wealthy family, which, on occasion of great festivities, desires to display a noble magnificence, will be easily understood by the plans, sections, and details."

To continue Chateauneuf's description, we find him saying: "I may consider myself fortunate that I was allowed to choose better materials than usual, and even to give occasion for the application of sculpture and painting in the decoration of the apartments."

The façade of Dr. Abendroth's house to the Jungfernsteig is a simple astylar composition of five bays with a canted angle distinguished by a balcony; horizontally it is grouped into three unequal divisions, the windows of the first-floor rooms being the most important in design, and thereby satisfying the demand for a dominant grouping, which is always an essential in an elevation of such simplicity. There are other subtle moves which the critic of architectural design will recognize, notably the graduation in width of the windows, the reticence displayed in the rusticated quoins which frame the building, and the perfect adjustment of the entablature. (See Plate IV.) The mouldings and members of this elevation are of sandstone. Fig. 1 gives a section through the building on the centre line: the Florentine roof previously described is seen over the front portion, and the architectural attributes which embellish the entrance vestibule and the grand staircase are seen to be both functional and decorative. The great staircase of Carrara marble (Fig. 2), with the heads of divinities in the niches by the sculptor Siegel, is a lucid exposition of Classic taste; the superimposition of the Ionic order on the Doric below serves as a double screen; the adoption of a central column on the first-floor landing enhances the value of the entrance to the first floor from the staircase. Fig. 3 is a perspective of the semicircular saloon, the motif of which is Empire in character. The height of the plain encircling podium carrying the insulated order is effectively contrasted with the sculpture it supports, while the flat decoration of the ceiling is an object lesson in itself.

Between the years 1838 and 1839 Chateauneuf passed much time in England, being for the main part engaged, in conjunction with Mr. Mee, upon a competitive design for rebuilding the Royal Exchange. Their joint design aroused considerable

applause and received the second premium. Mr. Mee afterwards assisted Chateauneuf in the publication of "Architectura Domestica," which Ackermann published in 1839. "The Country House," edited by Lady Mary Fox in 1843, contains some excellent designs for a country house in the Italian manner by Chateauneuf, as well as descriptive letters by the latter, C. L. Eastlake, and another.

The published letters from Chateauneuf which accompany these designs contain many remarks showing how carefully he had studied general principles, and the correctness of the views he entertained regarding the question of style in building.

The fire which in May 1842 destroyed a large portion of the old town of Hamburg offered a wide field for the talents of the architect who strove to restore the city. A commission was appointed to remodel the plan of the part destroyed, and Chateauneuf was nominated president. As a result many of the important improvements were originated by him, including the arcaded porticoes by the side of the Alster Canal and those flanking the square of the Exchange; the former were carried out entirely from his detailed plans. From this time on to about the year 1850 he was engaged in the erection of public and private buildings, among them being the rebuilding of the great church of St. Peter; in this work he was associated with Professor Fersenfeldt. Then followed the residences for the clergy of St. Peter's, the new Post Office, the large warehouses with residences for Schulte and Schemmann and for Mr. Davenport, the hall of the Tailors' Company, a large warehouse for the Cabinetmakers' Company, and other works. All these buildings are distinguished by originality in planning and taste in the selection of the suites of mouldings and enrichments, for which innumerable studies were made.

Previously, in 1846, he had visited Christiania to restore the "Church of the Redeemer," and he was also employed to prepare another design for a smaller church, which was subsequently carried out from his plans by a former pupil, Hanno.

His last supreme effort resulted in the production of one of his grandest architectural conceptions in the design submitted for the Storthing Haus at Christiania, which, however, was not carried out, as the cost was too great. This was his last work, and it formed a worthy termination to his professional labours. He died at Hamburg on 31 December 1853.

Chateauneuf possessed a type of mind peculiarly sensible to refinement; his energetic character led him to take a great interest in all public affairs; he was an active member of the Kunstverein, and of the Society for encouraging Arts and Manufactures. An accomplished artist himself, he took delight in the society of his brethren of all classes, whom he frequently consulted on the subject of his principal designs, thus ensuring a reciprocity of action between the sister arts.

Although, to-day, both practising architects and the critics who interpret the views of the public are engaged in conference anent the right policy for the development of architecture as a fine art, consensus of opinion favours a reverent attitude towards the achievements of the past. This in itself is

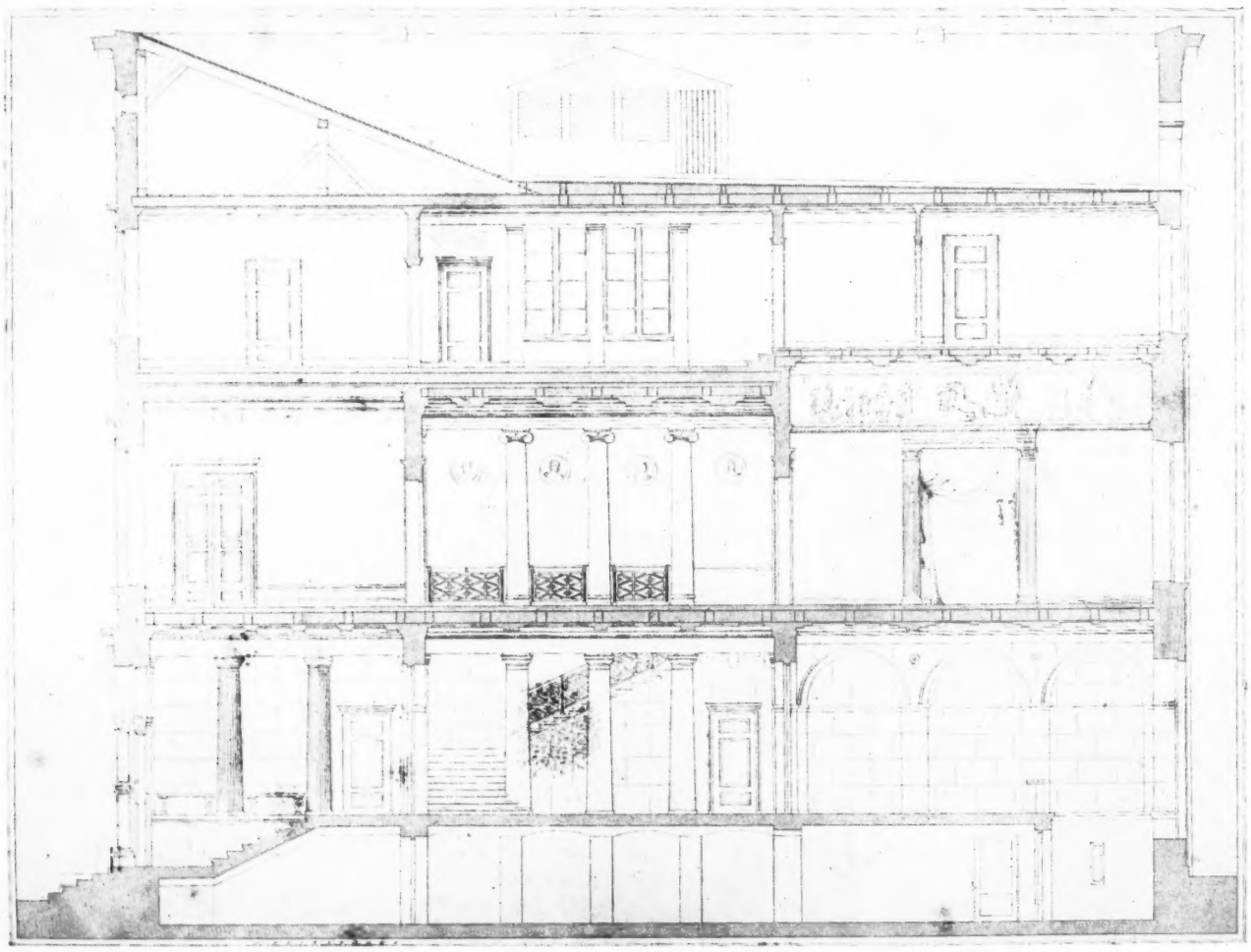
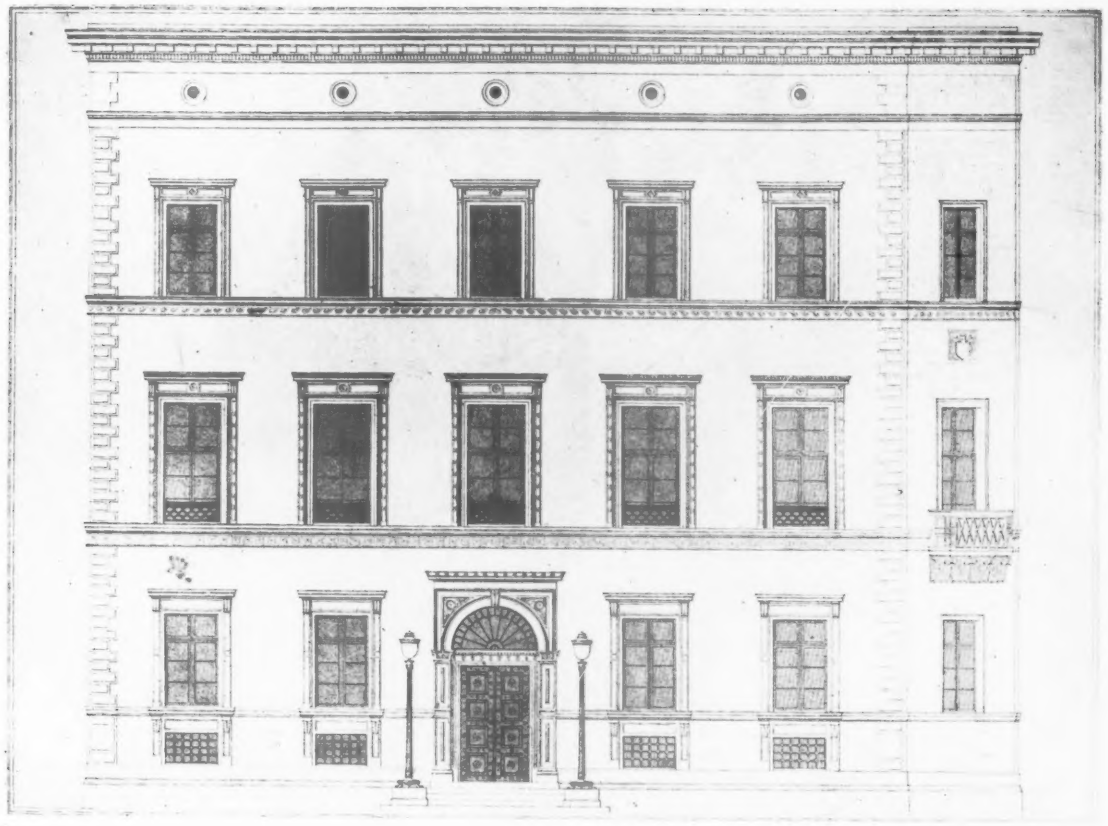


Fig. 1.—THE RESIDENCE OF DR. ABENDROTH AT HAMBURG: CROSS SECTION.
Alexis de Chateauneuf, Architect.



Principal Elevation.

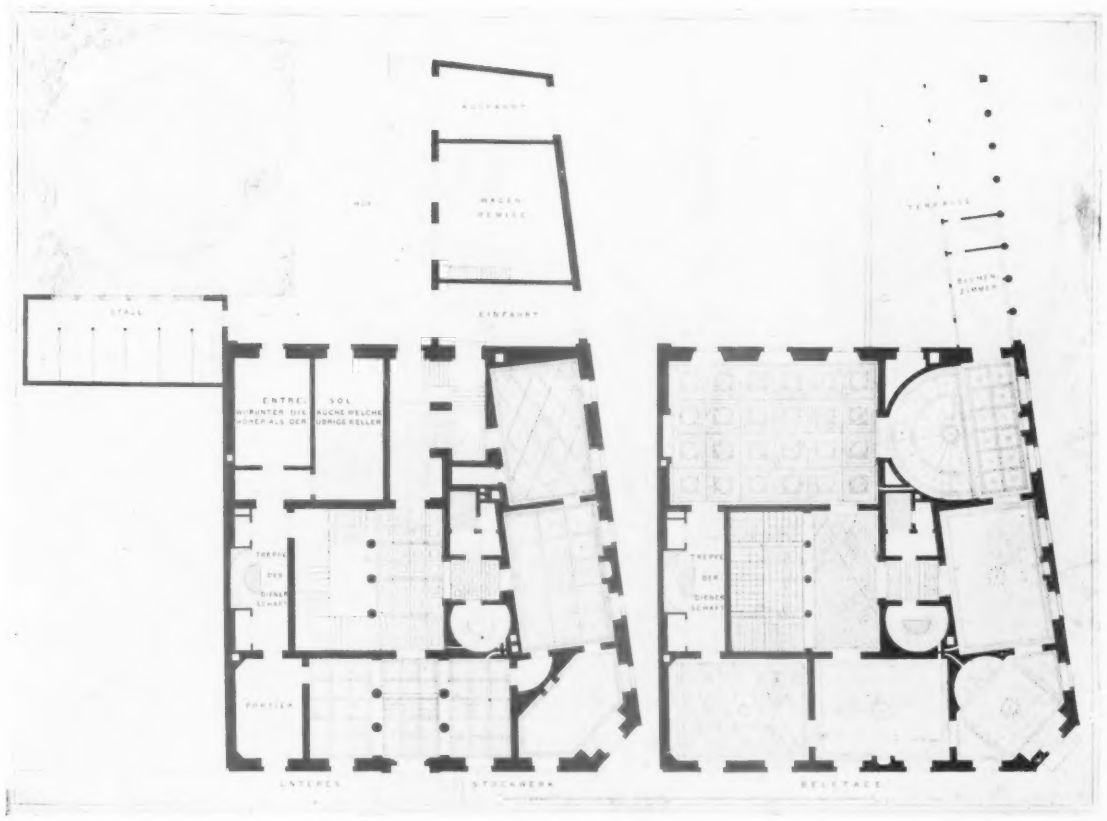



Plate IV. Plans. March 1919.

THE RESIDENCE OF DR. ABENDROTH AT HAMBURG.

Alexis de Chateauneuf, Architect.

a victory for those who believe in the continuance of tradition; and it should be borne in mind that the term "traditional architecture" is no longer fettered by insular prejudices. To-day such irrelevant questions as place of origin, period, style, or other purely local characteristic, are not allowed to influence the quest for correct form. The whole musical scale of architecture belonging to the world's history offers itself for comprehensive study; we can measure the qualities of one set of buildings against another, we can choose the finest models to add to our répertoire, and quote examples and authorities in support of our theories. Our power of conception is of necessity limited to a reconstruction of the various forms we have had experience of.

The wheels of architecture move slowly, in spite of abortive attempts to accelerate speed. There is only one definite course by which architecture can be advanced, namely, a tireless study of composition. Sir Joshua Reynolds in his Discourses dwells insistently on this, in so far as it relates to the art of painting, and his theories are equally applicable to architecture. The study of composition was the one absorbing occupation of the artists of the Renaissance, who, working on material offered by the ruins of Roman splendour, achieved fresh groupings, more subtle detail, and a literal return to the Classic spirit of the senses and understanding. From an introspective study of history and a logical application of the best models such research affords, there must inevitably result a continuance of tradition, and moreover an extension that is vital. Conception and composition are practically synonymous terms; construction is a factor complementing the two former, for a building of true architectural pretensions is always conceived in embryonic mass long before the problems of construction are entered upon.

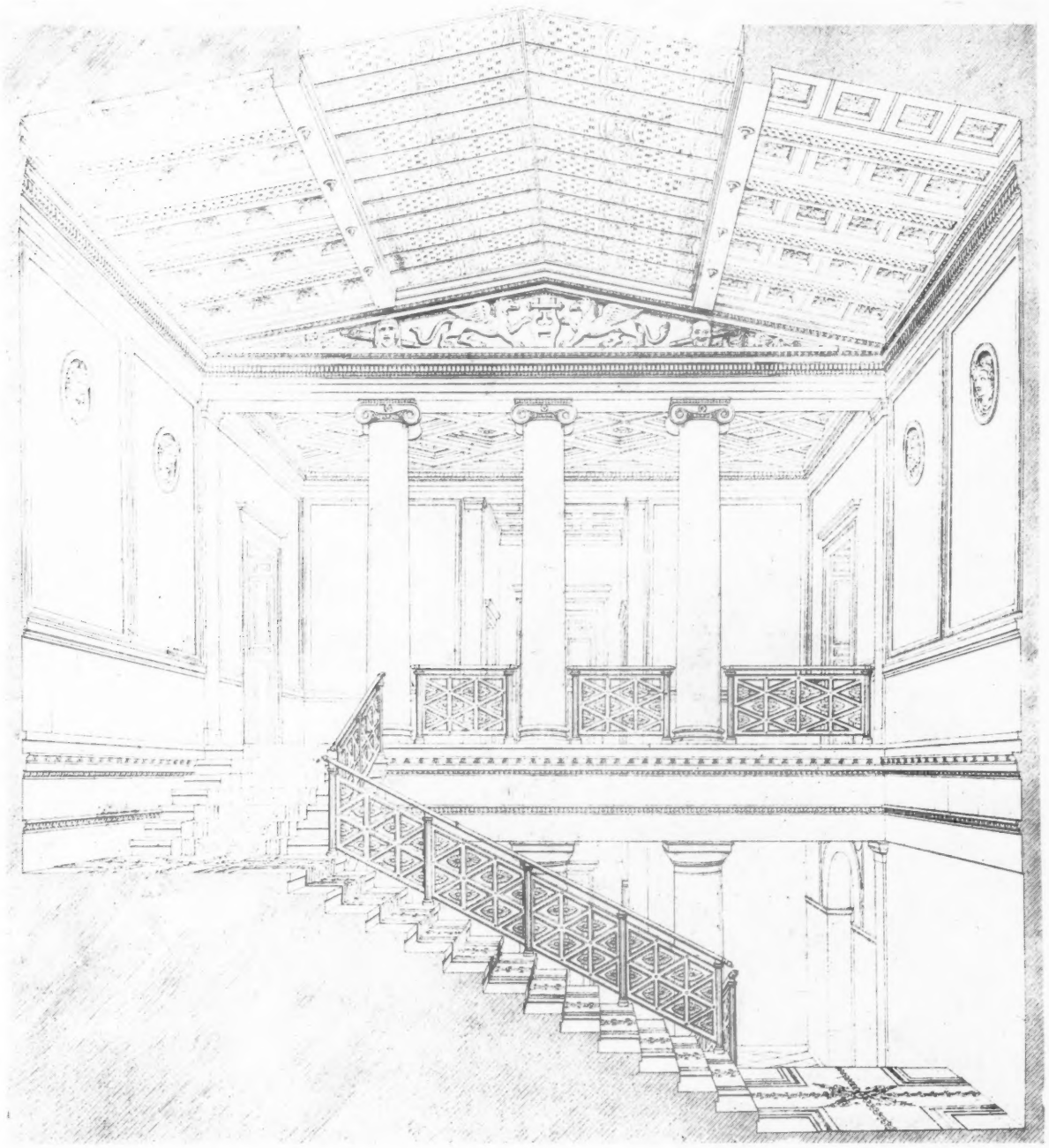


Fig. 2.—THE RESIDENCE OF DR. ABENDROTH AT HAMBURG: GREAT STAIRCASE.
Alexis de Chateauneuf, Architect.

It is now accepted that the invention of an entirely new mode in architecture, by any one individual, is an impossibility; for building expression is the language of many, and to be understood it must conform to rules generally acknowledged. In support of this contention we put forward the achievements of those who have paid homage to tradition, and contrast them with the productions of those who have mutinied against discipline. The mutineers, forced by the urgency of the position to declare their policy, submit casual propositions for a new order of things, which, on investigation, invariably prove to be a travesty of the rules they wished to avoid. There are others, and they are the more dangerous, because their zeal for speedy recognition leads them to ignore the conventions.

Architecture is a fascinating subject to write about: a facile pen will cover reams of paper; but the practice of architecture is the most secret of the arts; one must never be content with a first impression, or obscure one's sense of fitness by attractive sketching.

In conclusion, it is necessary to point out that the object of this appreciation of the work of Chateauneuf is to direct attention to the study of buildings which the nineteenth century produced, to show the consistency of an artist who never faltered in the realization of his ideal, and who was content to subordinate his sense of novelty to the sounder theories of the neo-Classic tradition, and one moreover who believed in that species of rich simplicity which is the paramount attribute of great art.

The Germany of eighty years ago was a land of artistic ideals: French influence was dominant, and a constant exchange of ideas took place. All this was changed after the war of 1870. The example of Chateauneuf shows how French architects practised in Germany, and the case of Hittorf, who became a naturalized Frenchman, proves the contrary. Heine read the portents of the coming storm with remarkable foresight.

## THE MARKET-PLACE, NORWICH.

FROM of old, the market-place, *forum, agora*, the heart of the city, has drawn all men to it, especially artists. For your market-place, especially in our eastern counties, is always the centre not only of life and movement, but of good buildings, most of them of considerable ancientry, with fronts that have for half a thousand years or more resounded to the cries of the hucksterer.

It is good for the artist, and good for the hucksterer's soul, when, as at Norwich, a venerable market-place is dominated by a noble cathedral. Its presence is a protest against excess of sordidness. Norwich Cathedral is of late eleventh-century origin, but most of the existing fabric is of the fifteenth century.

Earlier by a few years is the fine Guildhall, which, built in 1408, stands on the site of the ancient tolbooth. It is incredible that any of the buildings in the market-place can be contemporary with the Guildhall, although some of them would appear to be but little less ancient.

From the days of Old Crome and his son, Norwich has been famous for its school of artists, many of whom must have loved to depict its market-place; but it is doubtful whether any one of them has more successfully caught the spirit of the scene than has Mr. Frank L. Emanuel, whose spirited pencil drawing is reproduced as Plate V. opposite.

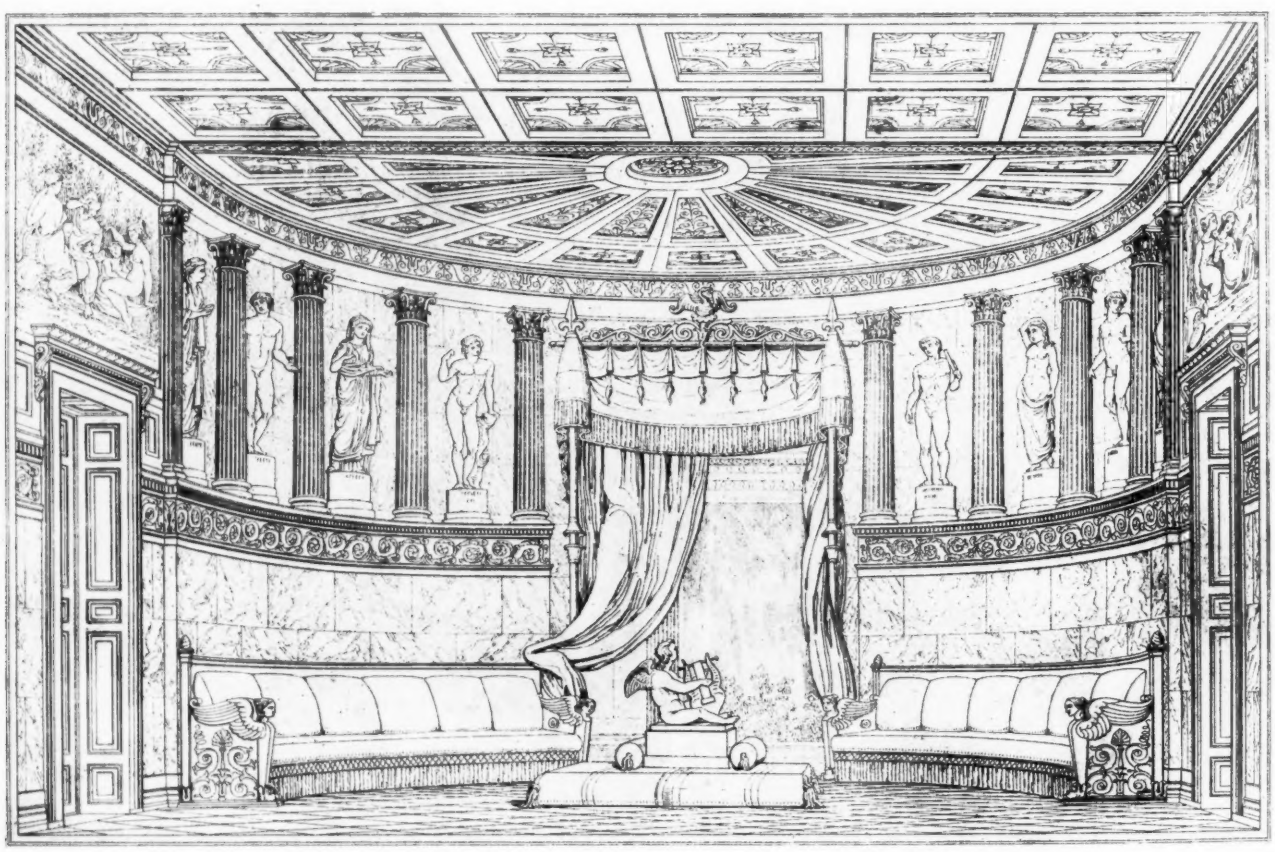


Fig. 3.—THE RESIDENCE OF DR. ABENDROTH AT HAMBURG: SEMICIRCULAR SALOON.
Alexis de Chateauneuf, Architect.

Plate V. March 1919.

THE MARKET-PLACE, NORWICH.

*From a Pencil Drawing by Frank L. Emanuel.*

# GEMS OF ENGLISH ARCHITECTURE.—II: ANCIENT TIMBER HOUSES IN KENT.

## Wardes, Otham, and the Old House at Home, Benenden.

By NATHANIEL LLOYD, O.B.E.

(*Concluded from p. 24, No. 267.*)

PERHAPS no feature of these old houses impresses one so much as their roofs. They are always ample, with good eaves, which cast pleasant-looking shadows, and, owing to this and good pitch, they seem to sit down snugly and comfortably upon the walls. The variety of alternate timber and plaster (light and dark) may arrest the attention, but it is the amplitude of the roof that "makes" the house. Such a roof as that of Link Farm would redeem almost any shortcomings of wall materials, and would ensure entirely satisfactory results whether the walls were of stone, brick, or tile-hung. How often one sees modern buildings erected cheaply, where the roof is starved and money frittered away on bad ornament or unnecessary detail! If these had been omitted and the money saved devoted to the roof, an architectural success would have been achieved, together with a more comfortable house for its occupiers.

When Sir Louis Mallet found Wardes, the hall was filled in with two floors, and divided into apartments, as already described. These he removed, so that it is now in its original form, as shown in Fig. 9, and it is interesting to compare this with the halls of the Old House at Home (Fig. 10), which belongs to Benenden, some fifteen miles away on the south side of the Weald of Kent. One notable difference is the springing point of the braces of the great central tiebeams. In the Old House at Home one of these can be seen on the extreme left of the illustration, eight feet above the floor, while the corresponding brace at Wardes has its springing point only some five feet up. The result is that the curved braces at Wardes are much longer than those at the Old House at Home, and the arch produced by them (and the short length of tiebeam exposed between their upper ends) is much more pointed. This has been considered an indication of the early date of Wardes; but, though it is certainly an exceptional feature, it is by no means conclusive evidence.

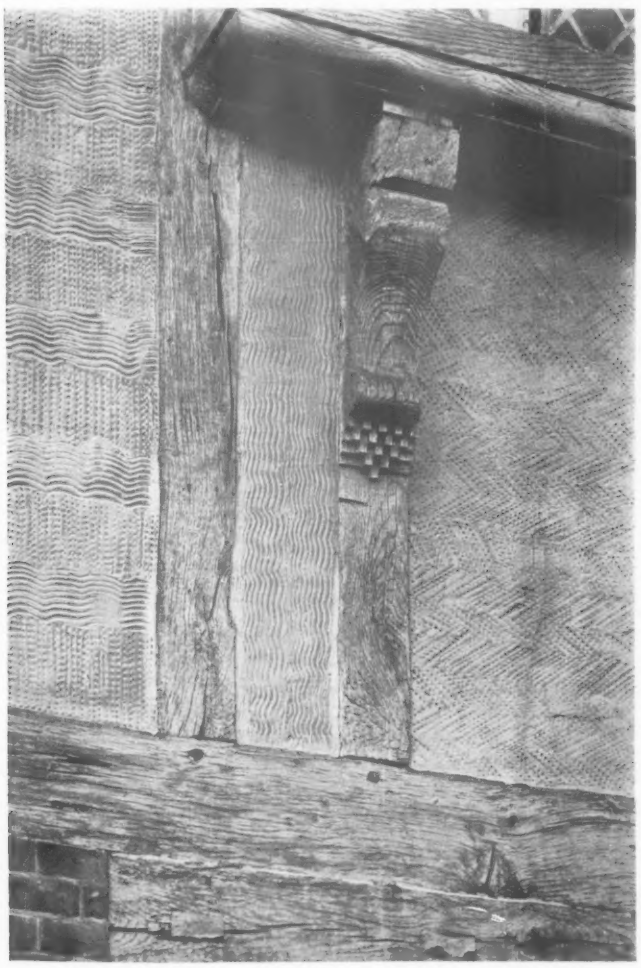


Fig. 8.—"WARDES," OTHAM: CORBEL WITH SQUARE BILLET MOULDING UNDER ORIEL IN SEVENTEENTH-CENTURY WORK.

At Dixter, in Sussex, which cannot be regarded as of later date than Wardes, the springing line of these braces is nearly seven feet from the floor, but the span here is much greater and the whole structure on a larger scale. A more reliable guide to dates may perhaps be found in the mouldings of the beams at the upper ends of these halls. These moulded beams were features of all timber hall-houses, and, even after the principal apartment was built with a ceiling at first-floor level, these structural beams continued to be moulded. Most of the examples which I have examined (and I have examined a very large number) had the upper members of the mouldings in the form of crenellations. These can be seen in Fig. 10, together with the spur, returned to screen the upper-end doorway. This spur has been cut away at Wardes, and the face of the beam above the existing mouldings has been cut back almost to the faces of the other wall timbers, just as though the crenellated mouldings had been cut away. The scar where the spur was hacked away shows traces of mouldings continued above those remaining. Fig. 15 shows this.

On the whole, there would appear to be little room for doubt that the missing mouldings were crenellations. It will be remembered that the capital under the external spur (see Fig. 3, February) was crenellated. Now, crenellations are comparatively rare in fourteenth-century work, but extremely frequent in fifteenth-century structures, and, having regard to the fact that new forms penetrated slowly into remote country districts and that there is no record of any person of distinction connected with Wardes, it is reasonable to suppose it to be a house where one would not expect to find early examples of crenellated work, but rather that they would be of late date. Sectional drawings of the moulded beams in the five hall-houses to which reference has been made were shown in Fig. 2, p. 22, last month. All are, undoubtedly, Perpendicular mouldings. That at Dixter is the earliest in character; the members are greater in number and less coarse than any of the others. Now, Dixter could not have been built earlier than during the first half of the fifteenth century, because its hammer-beam type of roof was a very late feature of Gothic architecture, and that of Westminster Hall (an extremely early example) was only erected in 1399.

Fig. 9.—"WARDES," OTHAM: THE HALL.

Fig. 10.—"OLD HOUSE AT HOME," BENENDEN: THE HALL.

Fig. 11.—"WARDES," OTHAM: DRAWING-ROOM, UNDER SOLAR.

Fig. 12.—"WARDES," OTHAM: THE RED PARLOUR.

Fig. 13.—"WARDES," OTHAM: SIR LOUIS MALLET'S LIBRARY.

Fig. 14.—"WARDES," OTHAM: LADY MALLET'S BEDROOM.

It is probable that Dixter was built near the middle of the fifteenth century. If so, Wardes might be later still. A section is also given (Fig. 2, Feb.) of the crenellated capital to spur at Wardes for comparison with those of the beam mouldings.

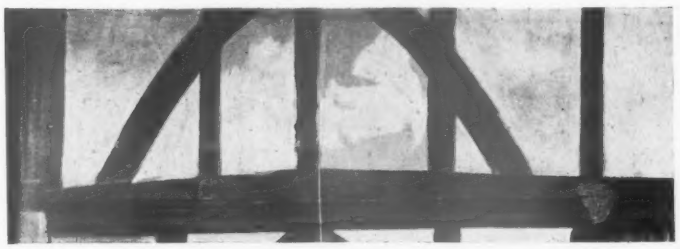


Fig. 15.—"WARDES," OTHAM: DETAIL OF HALL TIMBERS.

The lower end at Wardes, although of early date, appears to have been reconstructed, and it is possible that it was burned or otherwise so destroyed as to necessitate rebuilding. Evidence of this is apparent at its junction with the lower end of the hall. There are several details, such as the opening up of the hall roof by removing the ceiling at the collar beams and the removal of the modern shaft of the solar chimney, which Sir Louis inherited from the previous owner.

The remaining illustrations are of the interior. It is when one enters these rooms that one realizes not only that Sir Louis is a discriminating collector of choice furniture and all those things which go to the making of a charming interior, but that he has an uncommon feeling for texture and colour. This is expressed in the rugs, faience, and in the hangings with which he has covered the walls. In the hall is needlework of the time of Henry deux—indeed, he appears to have laid all Europe under contribution as well as many of the centuries. When Ambassador at Constantinople he gathered other delightful tapestries, rugs, and good things. When about to come away he arranged for these to be placed in safe keeping, but unfortunately his instructions were not fulfilled, and only the conclusion of the Peace will show whether they have fallen into the hands of some honest official. How such things would have enriched Wardes only the owner knows, but the rooms in their present state possess that air of comfort, satisfaction, and repose which many have endeavoured to secure but few indeed have attained.

# THE RENOVATION OF ST. PAUL'S: PROGRESS OF THE WORK.*

By MERVYN E. MACARTNEY, F.S.A., F.R.I.B.A.

DURING the War a work of the first importance has been going forward on the fabric of St. Paul's Cathedral. The fears of those experts who were of opinion, a few years ago, that a very serious task awaited the repairers have been more than justified: and in particular the south transept has been discovered to be in so shattered a condition that the cement used to strengthen and solidify the walls has found its way out, in several cases into the street and gardens beyond. The present article, however, deals with the completion of the repairs to the south-west pier of the dome, which marks a primary stage in the work of restoration at St. Paul's.

Now that the hoarding has been removed it is possible for anyone to observe the extent of what has been practically the rebuilding of this vital support of the dome. The whiteness of the substituted stones shows distinctly how the 3,000 cubic feet of new masonry has been inserted. It has only been possible to carry out this work by using the greatest care o avoid disturbance of the enormous weight of 8,000 tons which it is calculated that each pier carries Any sudden withdrawal of large extent of support might have involved most serious dislocation of pressure and created an alarming condition of affairs.

It says a great deal for the care and efficient workmanship of the artificers, contractors, and expert advisers that no perceptible settlement has occurred during the progress of the work. It would be untrue to say that no feelings of alarm have existed while these operations have been proceeding. But, fortunately, so much diligence has been exercised that no untoward accident has marred the steady march of restoration during the four or five years that have elapsed since the work was begun.

* Reprinted from "The Times" by special permission.

## Work on the S.W. Pier.

Many interesting facts have come to light, such as that the main stone on which the two arches pitch proved to be a huge block of Burford stone and not Portland which Wren employed in this pier. This stone was cracked right through. We know that great difficulties beset the builders in obtaining large stones, and evidently this block was utilized because there was no other of that scantling available from Portland. Its dimensions were 5 ft. by 6 ft. by 2 ft. 3 in. To replace it being impossible, the shattered portions, weighing 4½ tons, were removed, and as large a piece of Portland inserted as was practicable, which, grouted in cement, has made a sound base at this point.

Another discovery was the fact that a great many of the carved capitals were not the originals, but poor copies insecurely fixed to the stone behind them by cramps, dowels, and lead. In many cases so badly had they been fixed that they fell off on the slightest attempt to examine them. Although no positive evidence exists to show when they were executed, we may assume that they were of later date than Wren's building. No work of such a "shoddy" description would have been passed by Wren or Hawksmoor. When the full weight of the dome came on to the piers it caused serious shatterings of the stone walling, and it clearly went on during the first half of the eighteenth century, as the rubble filling of the piers dried and became compressed. The core or rubble

filling is not of uniform quality. A great deal of the mortar was made with a lime obtained by burning chalk lime or shells. Had Wren used even a poorly hydraulic lime he would have had a much more satisfactory agglomerate. Considering the extraordinary aptitude of his genius for experiments, more particularly in chemistry, one is lost in wonder that he should have used such a poor cement, especially as he was always lauding the "fine Roman manner" and meant himself to "build for eternity." That he was imposed on by some of the contractors is likely; we know that there were eight or nine, not all of them of the same excellence as the Strongs. For instance, in the construction of the S.E. pier the work is not nearly so good as that of the S.W. pier: the mortar is worse and the masonry of a very inferior character. To improve the power of resistance of the filling in the S.W. pier the method was employed of solidifying by liquid grout. By this means it is believed that in addition to the 2 ft. of reliable stonework on each side of the pier, we have consolidated at least an extra 6 in. of the core and possibly 1 ft. Taking a mean of 9 in., this means that the reconstituted work on the pier represents about half of the sectional area of the pier (i.e., 2 ft. on each face = 4 ft., and 9 in. of grouted core on each face = 1 ft. 6 in.—total, 5 ft. 6 in. out of 9 ft. 6 in.).

Another discovery was the method of construction of the building. The piers were built up with set-offs—that is to say, the masonry was reduced in area as the work gained height. The foundations are set on a bed of very hard clay and consist of two layers of stone each 2 ft. thick and spreading out 4 ft. all round the crypt-piers. The piers in the crypt are set back—i.e., reduced from this to 16 ft. × 22 ft. This size is carried up to the impost or moulding from which the vaulting of the crypt starts. We discovered that at this point —i.e., the level of the impost—the piers were set back or reduced 2 ft. They then continued perpendicularly till within 2 ft. of the floor of the church. At that point they went back to the face of the pier. I am indebted to Mr. Somers Clarke, my predecessor, for the valuable suggestion that on investigation it might be found that the vaulting was inserted subsequently to the main building of the walls and piers.

### Mylne's Restoration of 1781.

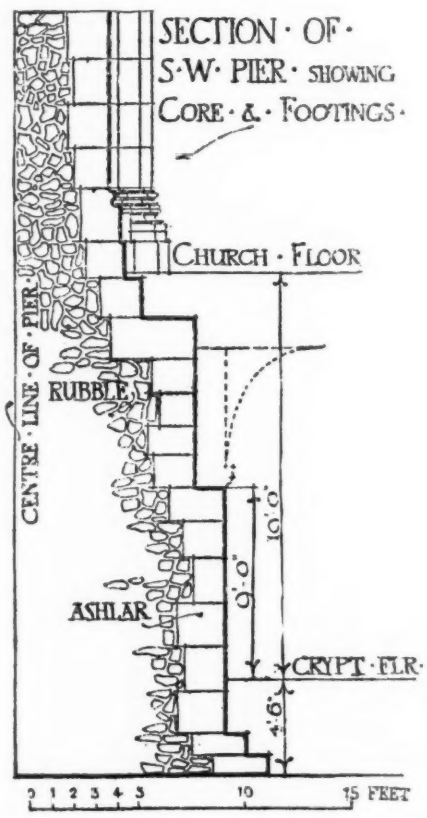
The Rev. R. S. Mylne, a great-grandson of Robert Mylne, a Surveyor of the Cathedral from 1765 to 1821, and a member of a family of masons for several generations, informed me that he had deposited the accounts, etc., connected with St. Paul's left him by his ancestor in the library at Lambeth Palace.

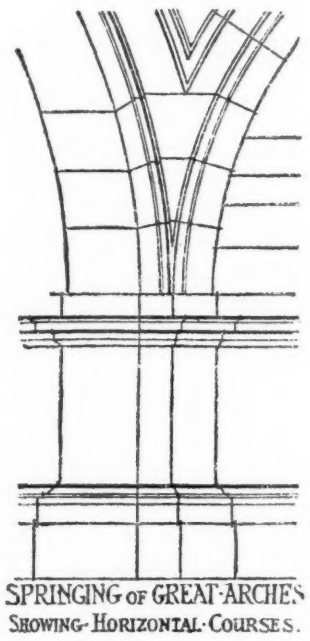
From these documents, which I was able to inspect through the courtesy of the Archbishop, I gathered much useful information. We learn from them that there had been serious destruction of the stonework, and that it had been covered up in an unsatisfactory way. Owing to the faulty system of repair, it was determined to carry out a complete restoration about 1781 and to close the Cathedral for nearly two years. Mylne seems to have used a large amount of stone veneer in his repairs, and also iron cramps. Owing to the formation of rust some of the masonry has cracked and split in all directions. We have removed every iron cramp and dowel so as to safeguard the public from all danger of falling stone as far as this pier is concerned. These papers of Mylne refer to some of the works carried out, such as the iron bands forged by "ships' anchor smiths" and the "compensation" worked on the mouldings and on the main cornice level to disguise the settlements over the four arches of the transept. Evidences of these works are there to this day.

One more discovery may be noted, though strictly a professional one, and that is that in the construction of the main arches Wren built the voussoirs at the springings of the arches on a level bed with only a short portion of the stone worked to a radius.

The urgently needed reparation, of which the first stage is now completed, has taken five years of unremitting labour.

We have learnt much as to the condition of this pier, and in particular we have come to realize that a bolder method of procedure than has been hitherto possible would save both time and money. By employing steel centering the work could be materially quickened and expense saved. The difficulties of working so as not to interrupt the services would be enormously lessened and the ever-present fear of failure eliminated. Further funds are required to press on the work, and it is for the public to come to our aid. The cost of labour and of material has practically doubled since this restoration was initiated, and without a substantial response the very necessary repair of the fabric may be considerably delayed. At this great moment in its history St. Paul's may well look for the offerings of many who are grateful both for its own marvellous escape from the perils of war and for the help which it has given to the nation in its time of trial.



# AN EXHIBITION OF EARLY DRAWINGS AND PICTURES OF LONDON.

THE Burlington Fine Arts Club is holding a notable show of works, as interesting from the topographical as from the artistic point of view. The collection, limited by the size of the Club's gallery, and surrounded with beautiful furniture of the periods illustrated on the walls, is quantitatively small, but choice in quality.

Love of and interest in the past and present of one's residence and street should lead to similar concern for one's borough. From the borough one's interest expands to one's town or city, and thus we have the makings of the good citizen. Interest in one's city leads to interest in the county, from the county to the country, and the patriot is evolved.

So much by way of preface. And now let us make a tour of the gallery.

H.M. the King lends some very beautiful monochromes by Canaletto and others. Canaletto is an artist who to many must appear even more lovable in his black-and-white work than in his paintings. No. 10, entitled "View from an Archway of Westminster Bridge," is a truly delightful example, a most loving record of the city's sunlit river-banks, framed by the soaring arch. The "View up River to Westminster" (11), also by Canaletto, and lent by Mr. Heseltine, is another superb drawing which makes us feel how much the river-bank has lost in picturesqueness and gained in dignity by succeeding "improvements."

A wonderfully modern and sunny wash-drawing of the "Piazza, Covent Garden" (14), by T. Sandby, R.A., the Royal Academy's first Professor of Architecture, is also lent by His Majesty. The delightful structure designed by Inigo Jones, of which this is a view and which still exists, is not nearly sufficiently well known. It never fails to recall to mind the charm evoked by arcaded continental streets.

The industrious and meticulous Hollar is represented by several interesting works. His "Westminster Abbey—South View from River" (9) is a quaint little water-colour which betrays his Germanic origin, and indeed might have been an early work by Holbein or Dürer.

The "'Church of St. Dunstan's-in-the-East during Reconstruction" is a most interesting pen-and-wash drawing. The subject has that undoubted picturesqueness offered by most buildings under construction or demolition. Possibly in the one case one's interest is stimulated by imagination, in the other by memories and by sentiments of regret, which latter may also be partly responsible for the popularity enjoyed by ruins among artists and others.

One of the pleasantest surprises of the Exhibition is to find William Hunt, the painter of birds'-nests and rustic figures, more than holding his own among masters of topography, and exhibiting such captivating work as the "View from a House in Pall Mall" (32) (possibly the house that is now part of Hampton's), and the still more attractive "View from the Churchyard of St. Martin-in-the-Fields" (34), showing the highly picturesque old houses existing in his day at the bottom of St. Martin's Lane. The whole is most modern and vivacious in treatment, and one could only wish that he had taken the licence of imagining away the strip of churchyard in the immediate foreground.

We shall encounter another pleasant surprise in the unfamiliarity of the name of the artist who painted with such extreme dexterity and loving sensitiveness "Old Blackfriars Bridge, 1808," hung on the opposite side of the room. This work alone should have secured him fame in his line of art. We learn from the catalogue that this picture, lent by Mr. C. Agnew, is wrongly named on the frame. Is it not possible that some other than Burford, who would only have been sixteen years old at the time, was the author of this gem of art? It looks like the work of a Dutchman.

Surprise again may overtake us on examining T. Malton, junior's, large water-colours, "East India House from the West" (64), etc.; for though he was a sound and observant draughtsman who better than most others rendered the impressive weight and solidity of London, his colour is disappointing. Perhaps time has changed it. He, at any rate, gives us the atmosphere of London as we are privileged to sniff it, whereas the earlier painters gave us a London thrusting an astounding assembly of clear-cut towers and spires into a pure sky serene in its Italian limpidity. They, in their wood-fire period, were probably also telling the truth.

No one has so far given us London in her most individual garb, namely, in fogs of various hues. Some of the most entrancing and some of the most astounding effects she can offer us are thus still waiting to be recorded.

True that from the purely topographical point of view such veiled and hazy records could never have the value of such a water-colour as, say, "Cuper's Gardens, Lambeth, from the River" (27), wherein we can see a lofty cutter-yacht rigged with a lengthy yard moored outside a group of rustic buildings, and a charming gazebo, which, two generations ago, existed on the site of Waterloo Bridge.

As an instance of the very interesting matter contained in the Club's catalogue we may extract the following note: "This garden, over against Somerset House, in the Strand, was named after Boydell Cuper, gardener to Thomas, Earl of Arundel, who, when Arundel House was taken down, moved some of the mutilated marbles there, and opened it as a place of popular amusement. It continued to be thus used, and was famous for its fireworks. Degenerating in character, it was suppressed about the year 1753."

The Shepherd family, so prominent among London's topographical artists, is well represented by George of that name in "The Nursery, Golden Lane" (28), executed (the drawing) in 1811. The nursery was in fact a school of dramatic art for children. Its humble front was rendered quite remarkable and decorative by the judicious insertion of carved armorial embellishments.

It is lamentable that such erections as the "Hall of Brotherhood of Holy Trinity, Aldersgate" (41), by W. Capon, destroyed about 1790, should have been totally lost to London. While agitating for years for a London museum somewhat on the lines of the Hotel Carnavalet (Museum) in Paris, and at last in part supplied by our since established London Museum, I always urged the advisability of its being established where there was sufficient ground to re-erect old London buildings and parts of buildings worthy of being rescued from annihilation—a genuine old London street thus to be formed, and each house to be furnished with such relics, etc., of its own period as should be acquired. Unfortunately this part of the suggestion has not been carried out. Such an exhibition as the one under consideration, and a knowledge of the treasures that are incessantly being destroyed, tempts one to plead once more for its necessity.

By Rowlandson are a bristling "Bartholomew Fair," a "Sale of Books by Auction at Sotheby's" (44), and a "Sale of Pictures by Auction at Christie's" (46). It is interesting to see that, even though housing and costume have changed, these two old firms are still in existence, and the attitudes and expressions of buyers and sellers are still ludicrously like those of a century ago, despite the artist's caricaturing.

More rustic scenes of that period are Varley's delightful little sketch of "St. Mary-le-Bone Church" (43), and an unidentified water-colour of the Old Cheese-Cake House, Hyde Park, 1797, from the King's Collection. What would we not give to have this genuine antique still "in situ" in the Park to remind us of the good old days of long ago! Even now a real and picturesque farm placed in some such suitable spot in the Park as is the Dell, and peopled as far as possible with its rightful animal population, would be a sheer delight and a source of instruction to Londoners both little and full grown. After all, a slice of Regent's Park is occupied by the Zoo.

But I digress.

The beautiful handling of colour in No. 49, "Fishmongers' Hall from the River," attracts one. It represents the predecessor of the present stately building, and is one of Sir E. Coates's many valuable loans to the show. Lower down the river it is not surprising that Girtin was attracted by the delightful semi-aquatic architecture of the old riverside houses, "attractive marine residences" portrayed in his "Wapping" (63).

S. Scott is, I think, rightly regarded as our British Canaletto, and examination of such of his works as the Marquis of Sligo's "Northumberland House, King Charles's Statue, and the Golden Cross, Charing Cross" (69), his finely drawn "Westminster Bridge and Westminster Abbey from the River" (81), his "View down the River from the Garden of Old Somerset House" (86), with its sky fretted with steeples, will show him to be a serious rival of the great Italian—indeed there is such superb surface description in the painting of the buildings on the right of Mr. E. C. Grenfell's splendid painting by him of "Old Westminster Bridge" as I believe Canaletto has never accomplished.

On the other hand I very much question whether No. 92, "Westminster from Lambeth," is not by a pupil of Scott rather than by the master himself.

A work by Gainsborough, painted at the early age of nineteen, "The Charterhouse" (72), lent by the Foundling Hospital, is apparently painted with a subtle compound of sunlight and pigment, and shows the painter's early promise which was later to be so entirely fulfilled. The painting of the sky was already about as fine as possible. Then there is a John Constable as fresh and breezy as one could desire in "Sir Richard Steele's Cottage, Hampstead" (82), a view from Haverstock Hill over an interesting foreground to distant London. This work irresistibly bears in upon one how much the great French landscapists of the Romantic School derived from our Constable.

The seventeenth-century Dutchman, Thomas Wyck, certainly employed his sojourn in England to good purpose. While unable to forget the skies and atmospheric effects of his native land, he succeeded in rendering in noble fashion the characteristics of London in such impressive compositions as Mr. Grenfell's "Westminster from below York Water Gate" (91).

Yet it is his compatriot and contemporary H. Danckerts who contributes the most striking and most interesting of the larger pictures in the show.

His "Whitehall from St. James's Park" (96), belonging to the Earl of Berkeley, is at once a splendid record of an agglomeration of buildings intensely interesting from the architectural point of view, but at the same time a moving and impressive impression of a stirring mood of nature. It is a work which should alike delight the antiquarian and the connoisseur of painting, and perhaps the wise choice of him by Charles II as his painter of royal palaces and seaports would point out that monarch as combining those two capacities.

FRANK L. EMANUEL.

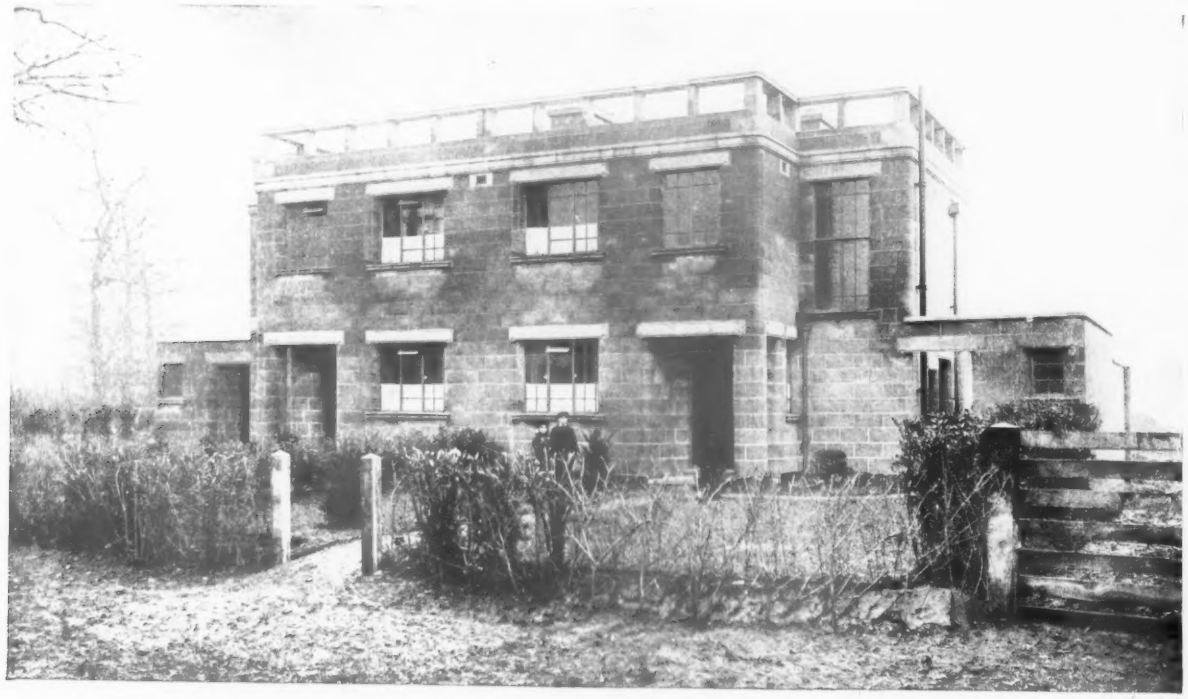
# COTTAGE BUILDING ON THE UNIT PRINCIPLE.

IT is estimated by a reliable authority that, as a result of the increased cost of labour and materials, the pre-war £200 cottage could not be built to-day for less than £500. It is obvious, therefore, that small house building in these abnormal times is an unsound economic proposition, unless rents are to be increased by more than 100 per cent.—and who would seriously suggest the imposition of such a burden upon a proletariat already seething with discontent? A way out of the *impasse* was indicated in a circular issued last month by the Local Government Board, which adumbrates a sort of loss-sharing partnership between the State and local authorities, the former undertaking, on certain conditions, to bear any charge incurred over and above that represented by the product of a rate of one penny in the pound. Assuming, therefore, that the necessary co-operation of the local authorities is forthcoming, there should be no difficulty in providing promptly the large numbers of houses that are so urgently wanted. But even under a State-aided scheme some attempt should be made to keep down costs, unconventional as the idea may seem to those accustomed to the reckless extravagance of war-time expenditure. Certain economies will, of course, be effected by the standardization of parts—doors, casements, fittings, and so forth—and as the erection of some hundreds of thousands of houses is contemplated the saving in this respect should be rather considerable. But standardization must not be carried too far. It is gratifying to note that the idea of planting stereotyped designs all over the country has now fallen somewhat out of favour, the prevailing sentiment being that every scheme should be worked out under the personal direction of an architect. This is distinctly encouraging. It is a pity that the R.I.B.A., through its housing competitions, ever gave support to a policy of standardization from which nothing but architectural sterility could be expected.

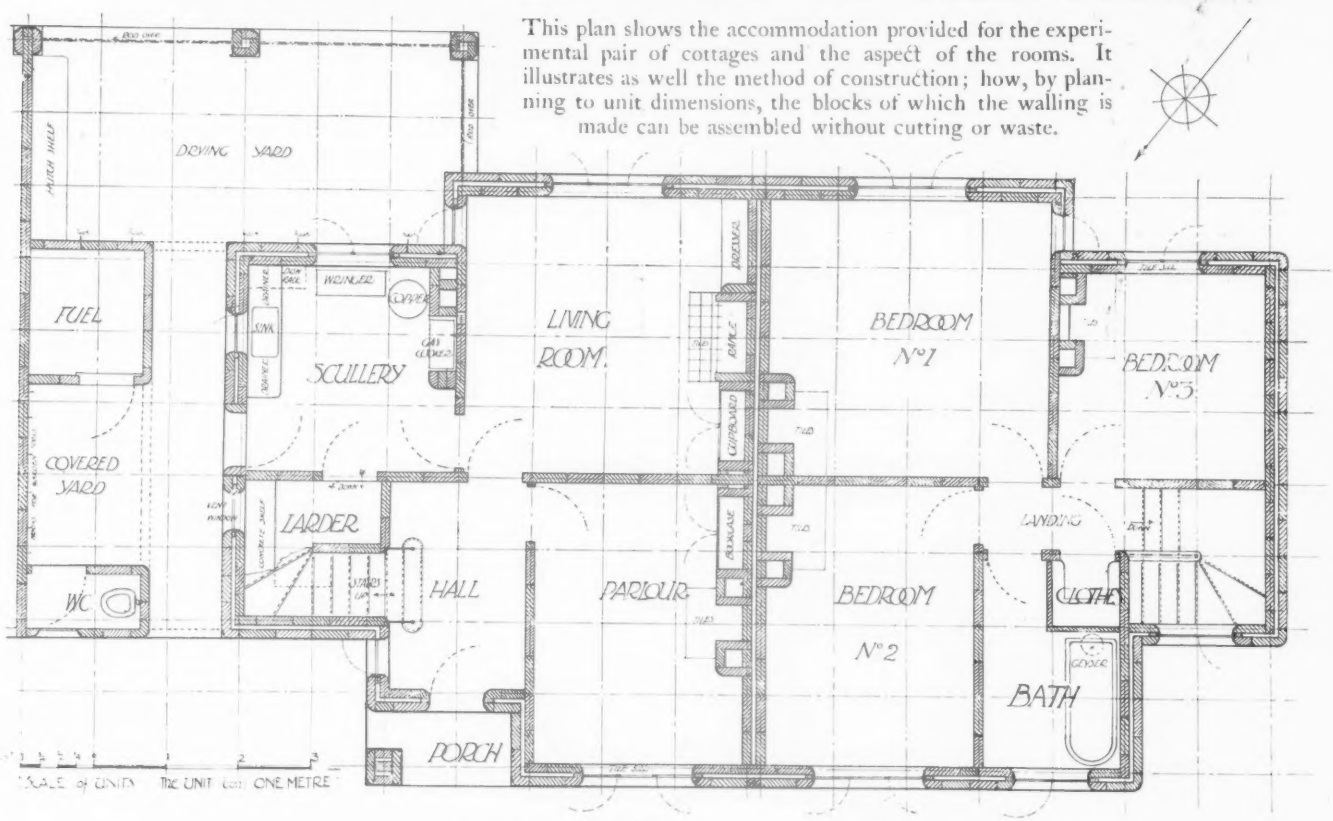
For a very interesting experiment in standardization of a different kind we are indebted to the enterprise of the Crittall Manufacturing Company, who, in conjunction with Mr. C. H. B. Quennell, F.R.I.B.A., have erected at Braintree, Essex, a pair of concrete block cottages on what is called the "Unit" method of construction. The system is explained in a pamphlet issued by the Crittall Company, from which the following particulars are extracted. The system is primarily concerned with building to dimensions, the multiples of which are called "Units." These latter are constants, with the result that variations of dimensions are made in an exact ratio: so that an attempt has been made to standardize, not the cottage as a whole, but the method of its construction and

building. The system is perhaps best explained by reference to the plan shown below.

In the case of this pair of cottages, the unit adopted was 1 metre, and in planning it was arranged that all walls were centred on unit lines, though the same could occur at half or quarter units if need be. The concrete blocks of which the walls are built measure $\frac{1}{2}$ by $\frac{1}{4}$ by $\frac{1}{8}$ unit, less the thickness of one joint each way. It therefore follows that if two blocks equal one unit in length, and the wall so many more, it can be built without any cutting or waste. The same end can be obtained on plan with all the openings necessary for doors, windows, etc., if these are arranged with regard to the unit dimensions and the bonding of the blocks. If the same methods are adopted in the elevations of the walling, and courses arranged to work to unit dimensions, a series of openings are formed to receive fittings which can be made to exact sizes, or variations of the same, the ratio of which will be constant.



This plan shows the accommodation provided for the experimental pair of cottages and the aspect of the rooms. It illustrates as well the method of construction; how, by planning to unit dimensions, the blocks of which the walling is made can be assembled without cutting or waste.




: GROUND FLOOR PLAN : : UPPER FLOOR PLAN :

EXPERIMENTAL "UNIT" CONSTRUCTION COTTAGES AT BRAINTREE, ESSEX.
Designed by C. H. B. Quennell, F.R.I.B.A., and W. F. Crittall.

The metre was adopted as the unit for this first pair of cottages because of the interest which is being taken at the moment in metrical measurement, and to see how far it could be employed by British workmen without complications resulting. The fact that this has been achieved is held to be some justification for the plea that the "Unit" system tends to simplification. As not a single workman on the job had any knowledge of metric measurements, the method adopted was to provide them with unit sticks, one metre long, divided into four parts, and with these they have been able to produce a building in which every dimension is metrical. This holds possibilities for reconstruction work in France and Belgium. Plans have now been prepared for other cottages, to be built to a unit of one English yard, which proves to be a very satisfactory basis, lending itself readily to brick dimensions.

The system is founded on the experience which the Crittall Company gained before the War as makers of casements, and since 1914 in the production of shells. In their opinion, if builders could be induced to adopt standard methods of building and sizes for the fittings, they and other manufacturers could produce the latter at prices which would be infinitely more favourable than anything which obtained before the War. This will not come about, though, so long as one man wants a casement of, say, 3 ft. 6 in. by 1 ft. 6 in. and the next customer insists on a size variation of $\frac{1}{4}$ in. each way. The same applies to all the other fittings of the house.

Fine gravel being obtainable on the site, it was decided to use concrete blocks, and these were made on a special "Winget" machine, and used as shown on the plan. The same type of block was used for the partition as the external walls, and there can be no doubt of the stability of the construction. But, as already pointed out, good bricks, had they been easily obtainable, could have been employed, working to the yard unit. No timber or woodwork of any kind has been used. The floors and roof are cast in concrete, reinforced with expanded metal (supplied by the Expanded Metal Company, of London and West Hartlepool), and experiments have been made with unit centering. So far as the roof is concerned, the unit system does not preclude the use of slated or tiled roofs. In the case of this pair of cottages, flat roofs were used because it was felt to be advisable to make an attempt to overcome the prejudice with which this method is generally regarded. The roof concrete was composed of finely graded aggregate, and has been tarred on the surface. The windows are unit steel casements, and the elevation shows that by a combination of these it is possible to fill any sized opening which it may be required to glaze, subject to the fact that the same must conform to unit dimensions.

Internally, the floors are covered with a jointless flooring, with rounded angles to the skirtings. The walls in some rooms are finished with a thin coat of plaster, but the surface and appearance of the blocks is so pleasant, hard, and durable that it is proposed to leave the hall, stairs, landing, and offices as they are.

Later, when plant is available, it is proposed to make the doors in pressed steel. Here again is an opportunity for an intelligent development of the country's resources. From the point of view of national economy, it would be desirable to attempt the use of the national product, steel, in lieu of the imported commodity, timber, which for many years must remain high in cost and inferior in quality.

The practical conclusions from the experiments are:—

The system tends to economy in that it eliminates cutting and waste.

The cost of this pair of cottages cannot be taken as any criterion, because they have been built in an experimental way; but the company are advised that, notwithstanding this, the amount which has been so spent is not in excess of prices which are now being paid for cottages with less accommodation, but built in large numbers. It is estimated that under similar conditions the employment of a proper unit system might reduce costs from 25 per cent. to 30 per cent., and it is hoped to achieve this in the larger scheme which is now in hand.

The system lends itself readily to planning and estimating. The architect in designing can rapidly estimate superficial areas and cubical contents. The plan illustrated, for instance, contains so far as the house is concerned forty-nine super plan units. Such basis is a very valuable help in planning, and also lends itself readily to estimates of costs and actual pricing of construction.

The Crittall Manufacturing Company are prepared to give further details of the system to anyone interested in the housing problem, and the actual cottages can be seen at any time at Braintree.

The Hall.

The Living Room.

EXPERIMENTAL "UNIT" CONSTRUCTION COTTAGES AT BRAINTREE, ESSEX.