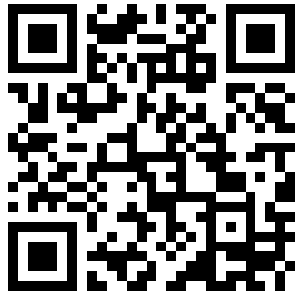
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JOURNAL OF THE

AMERICAN INSTITUTE OF ARCHITECTS

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Planned Cities—II—Edinburgh

IN the summer of 1923, an American journalist walked 600 miles through England and southern Scotland and on completing his journey at Edinburgh said that he had been generously rewarded for his feat by his enjoyment of the striking beauty of the Scottish capital. He discovered something in Edinburgh—what he called "a dignity, a nobility, an inspiring atmospheric uplift" that he had found in no other city and could not quite fathom. He had difficulty in understanding what it was that appealed to him in this northern city—with its dull gray buildings and dull gray skies. But he showed that he really understood why Edinburgh was to him a "wonder city"—when he described the strength, dignity and general beauty of its architecture, the graceful lines of its silhouette against the sky, the evidence it gives in its structural development of the ideals, culture and historic traditions of the Scottish race.

As a native of Edinburgh, I set forth this tribute rather than pay one of my own. But it leads me to say that the experience of growing up in a city like Edinburgh is necessary to prepare the state of mind that accepts the beautiful in architecture at its true value as a force in moulding character and in developing a sane outlook on life—an outlook that is too often warped by the short-sighted materialism that destroys common sense as well as ideals and imagination. To achieve a beauty of this educating quality, the buildings of a city must be designed in harmony with their natural environment and must be linked with and expressive of the literature, art, science and physical courage of the people who build them.

The Edinburgh we admire is the Edinburgh of the pre-industrial age. It was designed and largely built in the latter part of the eighteenth and the first part of the nineteenth centuries. The ancient part of the city is full of crowded slums caused by continued use of high tenement buildings, closely packed on courts and alleys, as homes for the poorest citizens without adaptation to modern needs. On the other hand the modern additions to the city since the development of the railways, have been as defective in design and arrangement and as disorderly as those of other cities that have expanded during the industrial age through which we have been passing.

Anarchy in City Building in Modern Times

Modern industrial methods and forms of growth have forced us to drift through a century of anarchy in the building of cities. Whether or not we are emerging from that hateful period of experiment in massing people and buildings into congested and disorderly aggregations, and in denying ourselves opportunities for closer contact with natural environment, may be open to question. But surely, in any case, our power to suppress the ugliness, and disorder and false economic standards that have so far been too much the concomitants of industrial expansion, cannot be less in proportion to our greater task, than it was when Washington and Edinburgh were planned. For, strangely enough, our decadence in building cities, as places in which nature and art may jointly contribute their share to our well-being, has taken place side by side with the development of higher skill in almost every other direction in which human effort is applied.

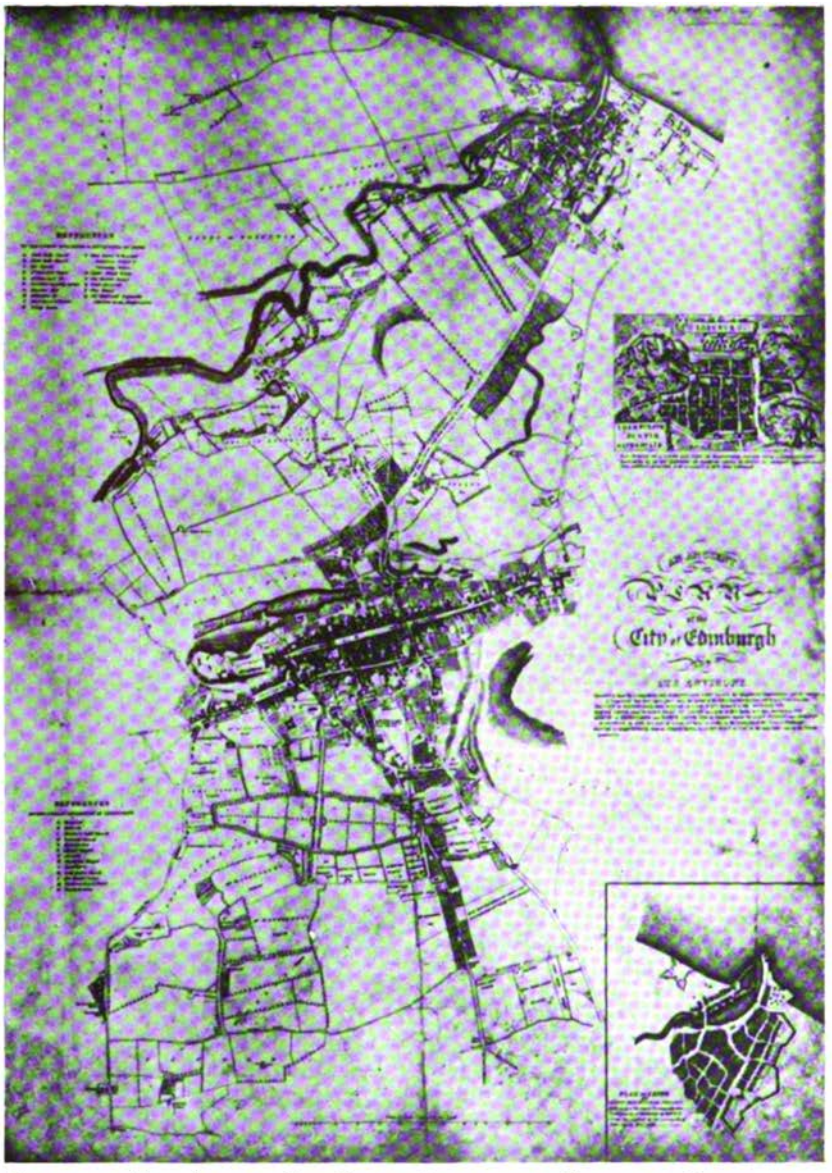
It may be hoped that we have reached a stage when, realizing the limitations of individual wealth to make for the enrichment of life, we can look forward in hopeful expectancy to some real effort being made to improve the structure and environment of the modern cities. The task of doing so is colossal compared to what it has ever been, but so also are the accumulated resources of money, experience and skill of later as compared with earlier generations. In any event, the force of circumstances caused by past failure to plan cities on the one hand, and the growth of education on the other hand, have brought into being a rapidly growing realization of the need of more beauty and order in town development, and some of the most pronounced evidences of the existence of that realization are to be seen in America.

Edinburgh as a city in which structural and natural

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EDINBURGH—THE ANCIENT CITY BEFORE EXTENSION TO NORTH AND SOUTH

beauty are present in an exceptional degree, is, of course, an inspiration rather than a guide to those who are engaged in helping to build up cities in America. That conditions have changed since the newer part of Edinburgh was built, or that ideals, customs and laws in America today are different from what they were yesterday in Scotland, does not lessen the value of Edinburgh as an example in city-planning. Edinburgh provides us with an object lesson of the value of using the architect, not only in designing separate buildings, but in planning and moulding the city as a unity of buildings fitted agreeably and spaciously into its natural setting. My present object in writing this article on Edinburgh is to indicate what was achieved in one instance, during a generation, by recognizing the place of the architect in achieving this unity.

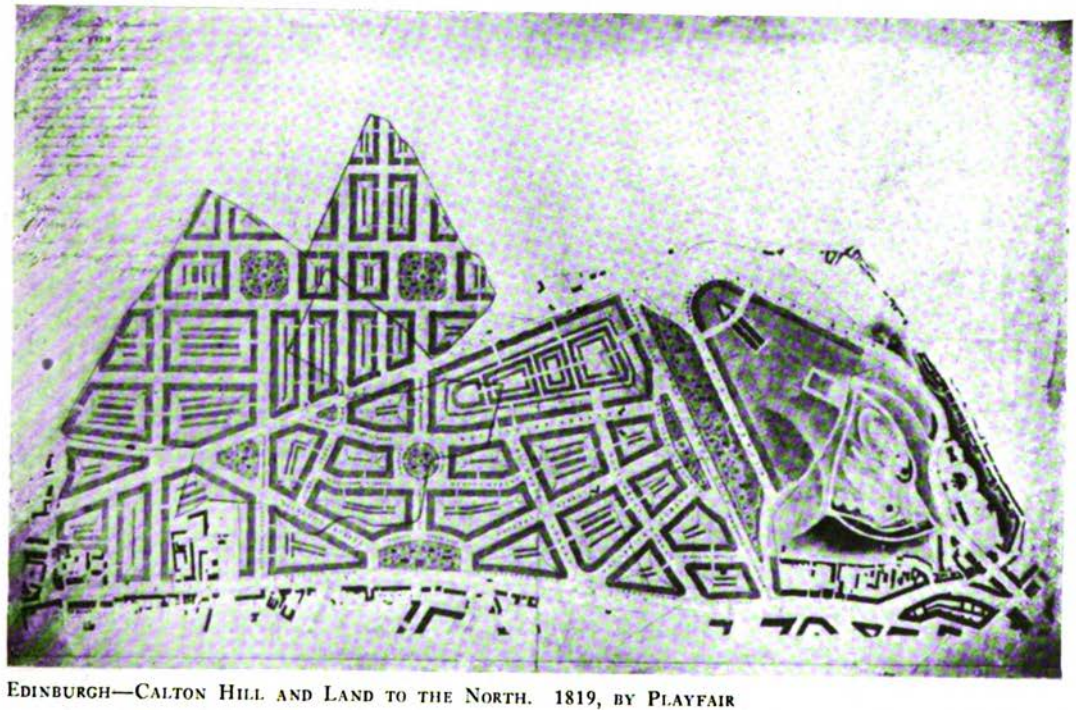
Old Edinburgh

Before 1765, Edinburgh consisted of the ancient city lying along the crown and slopes of the hill extending between the Castle and the Royal Palace of Holyrood. The streets were crowded and narrow and the leading citizens saw the need for extension of the town into new suburbs. Extension was made difficult towards the north because of the North Loch occupying the site of the present Princes Street Gardens, and also because of a deep valley on the south. Moreover citizens had been accustomed to live in closely crowded tenements. The old city had grown up within walls erected for

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EDINBURGH—CRAIG'S PLAN AS CARRIED OUT, WITH REID AND SIBBALD'S PLAN TO THE NORTH



EDINBURGH—CALTON HILL AND LAND TO THE NORTH. 1819, BY PLAYFAIR

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EDINBURGH—LOOKING EAST ON PRINCES STREET. ROOF GARDEN OVER PUBLIC MARKET IN FOREGROUND. SCOTT MONUMENT AND CASTLE

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EDINBURGH—FROM CASTLE HILL OVERLOOKING FORMER SITE OF NORTH LOCH NOW OCCUPIED BY RAILWAY AND GARDENS—ROYAL SCOTTISH ACADEMY AND ROYAL INSTITUTION IN CENTER—RAILWAY STATION UNDER COVER WITH ROOF GARDEN ON LEFT—SCOTT MONUMENT, NORTH BRITISH HOTEL AND CALTON HILL

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EDINBURGH—ST. GILES CATHEDRAL

defensive purposes. The first charters were granted for narrow lots with deep gardens, but as time went on and population grew, the building development became more and more intensive. Outward expansion was difficult and buildings had to be erected on all available open space and made as high as possible. As congestion within the restricted city continued, real estate owners found their opportunity. The owner of the narrow lot put an arch through the building fronting on the street and carried an alley down the center of his lot, building high tenements on both sides. These alleys or "closes" are described as a picturesque but unhealthy combination of lofty and long parallel ranges of buildings with quaint corbellings, timber projections, dormer windows, outside stairs and piazzas. There was no sanitation nor privacy.

And yet as late as 1769, or a few years before the plan of extension of the city was prepared, we are told that there were living in the closes of the Canongate two dukes, eighteen earls and countesses, fourteen lords, thirteen baronets and a host of eminent men. There were 294 of these alleys a few feet wide and ten miles in length, and some of them having a fall between the ends of one hundred feet.* In spite of courageous efforts being made to improve conditions, Edinburgh still suffers from the habits engendered by this period of intensive centralization; and one part of the old city has a density of 100 persons per acre.

The first steps in planning Edinburgh were taken as a part of an effort to promote the decentralization of its population. The scheme was first projected in the time of Charles II but was not carried out until the early years of George III. James VII of Scotland, at that time Duke of Albany, gave the citizens a grant to promote the enlargement of the city and to build bridges. Owners of land were required by royal decree to part with the land at reasonable cost—and provision had to be made to build bridges to assist in securing communication. The French influence was apparent in the early planning work in Edinburgh.

* Paper by T. P. Marwick, Journal of Surveyors Institution. June, 1923.

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EDINBURGH—TOLBOOTH ON CANONGATE—ILLUSTRATES CHARACTER OF TENEMENTS FACING THE STREET, AND ARCHED ENTRANCES TO ALLEYS AT REAR. MANY TENEMENTS FACE BOTH SIDES OF THESE ALLEYS ON THE HILL SLOPES

The 18th Lord Erskine prepared plans while in exile on the Continent. In a paper written by him in 1728, he suggested improvement of streets, among other things, and appears to have been the originator of the idea to form Princes Street with gardens at one side. Lord Erskine speaks of making "fine avenues to the town and outlets for airing and walking by the bridges."

Craig's Plan

The Nor' Loch was drained in 1763 and a bridge erected across the valley to the site of the new town in 1772. Meanwhile a competition was held for the best plan for laying out the site and, as a result, the plan of James Craig was adopted in 1767.* As an indication of the spirit of the time towards the architectural profession, it is of interest to note that Craig was given a gold medal and the freedom of the city.

The plan was of the usual rectangular type—with straight streets and squares—in that respect resembling Penn's plan of Philadelphia. The main streets were 100 feet wide with large squares placed so as to secure architectural effect and facilitate circulation. Without belittling the plan, one may claim that the beauty of Edinburgh is mainly due to the manner in which the city was built after the plan was made and to the maintenance of the open space of Princes Street Gardens surrounding the Castle Rock—rising to an elevation of 300 feet above the valley. Proposals to erect buildings on these gardens in 1774 were happily defeated.

R. L. S. on the Plan of Edinburgh

Robert Louis Stevenson, writing of the plan of Edinburgh, referred to the design as "faulty and short-sighted" and the architect as "essentially a town bird who laid out the modern city with a view of street scenery alone." It is curious that Stevenson should have had the vision to appreciate the importance of regional planning. He said the country did not enter into the plan of Craig and "he had never lifted his eyes to the hills." He referred to the lost opportunity of not making the streets on the northern slopes in the

* Queens Square in Bath was developed in 1729 and the Circus in 1764.

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EDINBURGH—PRINCES STREET GARDENS



EDINBURGH—WEST ON PRINCES STREET. ROYAL SCOTTISH ACADEMY, BY W. H. PLAYFAIR, ON RIGHT

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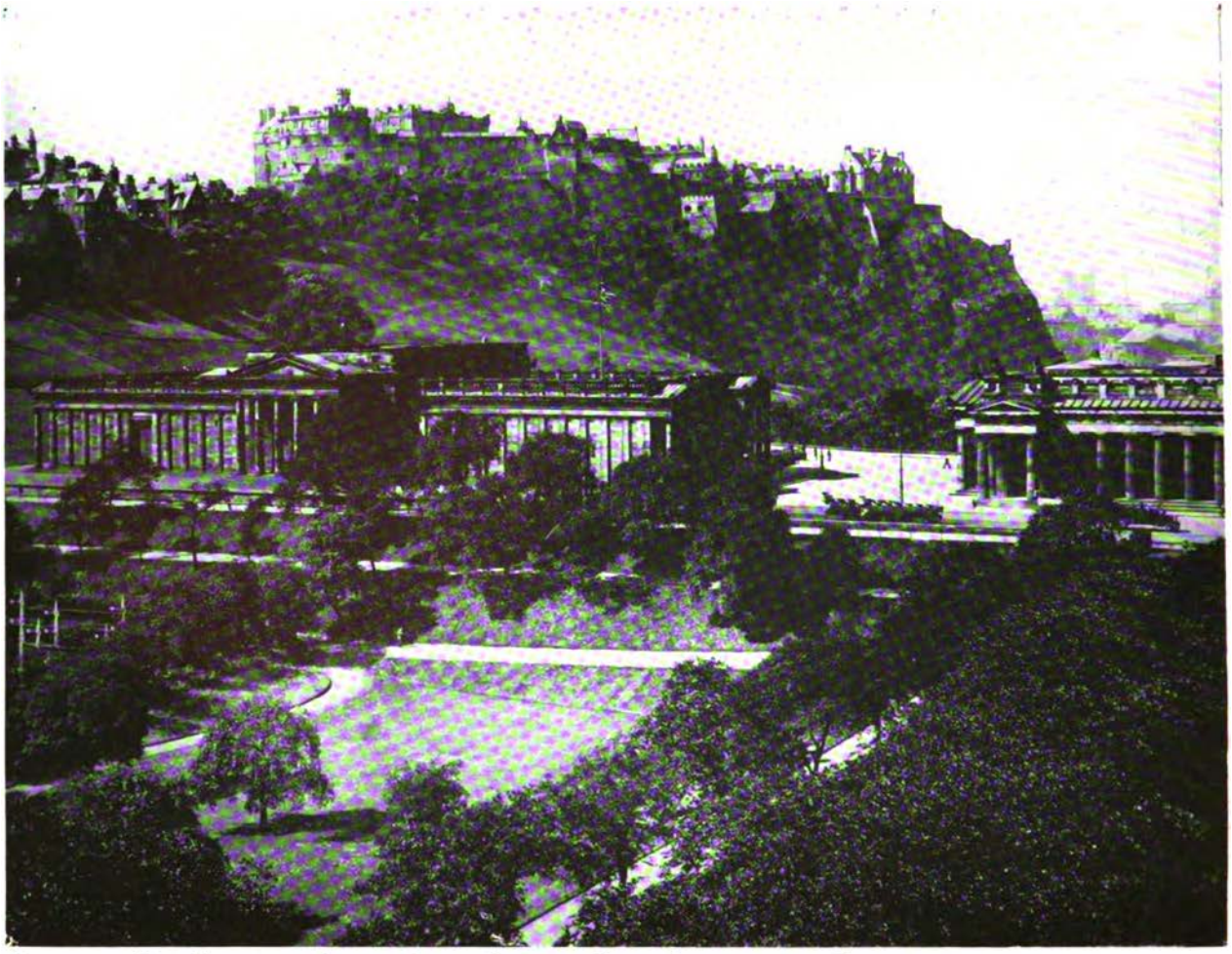


EDINBURGH—MORAY PLACE, BY GRAHAM, 1823



EDINBURGH—FROM DEAN BRIDGE

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EDINBURGH—THE CASTLE AND PRINCES STREET GARDENS. ROYAL INSTITUTION IN CENTER

form of terraces commanding beautiful views. Many of the houses in his opinion front the wrong way, like the man with the muckrake. "It is too often," he says, "that you have to go up to the attic windows to get a view of the diversified surroundings of the city." "Nevertheless," he adds, "it is all the more surprising to come suddenly upon a corner and to see a perspective of a mile or more of falling street, and beyond that woods and vales and the blue arm of the sea and the hills upon the further side." Undoubtedly the climate of Edinburgh lends point to his description of the plan as consisting of "draughty parallelograms."

After Craig's plan was made and the land laid out, an offer was made of £20 to the person who could build the first house. The bait was not accepted for a long time. The original ground rent of land in Princes Street was equal to about one and a half dollars capital value per square yard and today it fetches the equivalent of $13,000 or 9,000 times the price it was when it was planned 150 years ago. Even at that price it is low, compared to the highest values in other cities of 420,000 inhabitants. The present area of the city is 50½ square miles.

After the area planned by Craig was more or less developed, other plans were made—one by Reid and Sibbald in 1806, and a series by W. H. Playfair, Crichton, Milne and Bell, Nasmyth and Reid, in 1817-19. Most of these men were provincial architects. W. H. Playfair, whose plan of 1817 was adopted, collaborated with Adam in designing the University buildings. The last of the series of Edinburgh plans was made by Graham in 1923, for the property of the Earl of Moray, and was the first plan to introduce curved lines.*

Value of Display in Building

The beauty of Edinburgh is in large measure due to the configuration of the land on which it is built, which enables buildings to be displayed to the best advantage. It is a city set on several hills with deep valleys between them. No doubt one of the reasons

* Paper by Mr. Horsburgh Campbell, City Engineer of Edinburgh, 1912.

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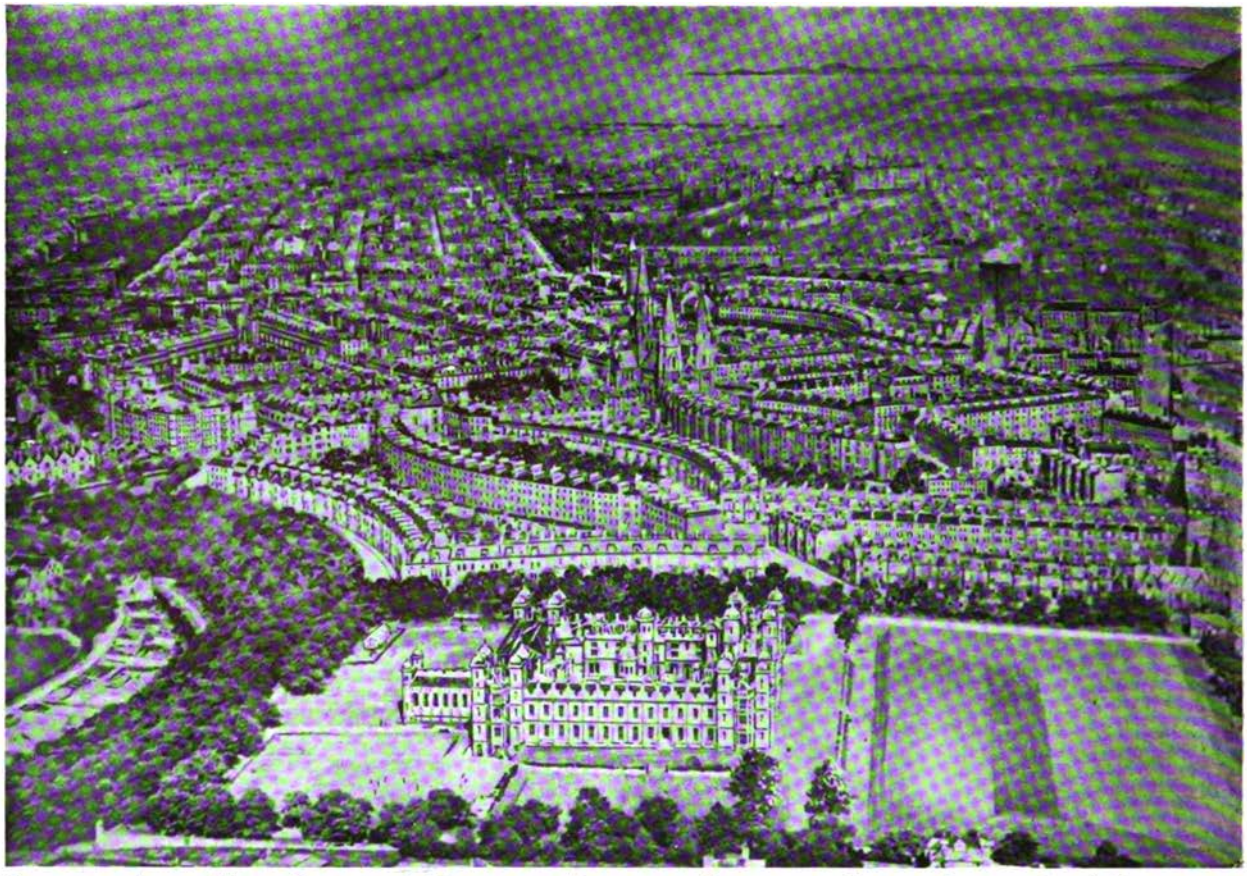


EDINBURGH—REGISTER HOUSE, BY ADAM



EDINBURGH—VIEW OF DEAN BRIDGE, SHOWING DIFFICULT TOPOGRAPHY

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EDINBURGH—AERIAL VIEW. DONALDSON'S HOSPITAL, BY PLAYFAIR, IN FOREGROUND. STRAIGHT LINES OF CRAIG'S PLAN AT LEFT OF CASTLE. CRESCENTS INDICATE CHARACTER OF PLANS PREPARED AFTER 1830

that caused the citizens to employ architectural advice in planning the city was due to the difficulties caused by these natural conditions. Thus nature made the employment of the architect necessary and at the same time gave him his opportunity. For sixty-five years, from 1765 to 1830, every step in development seems to have been taken under the guidance of leading architects in the city, and happily they commanded a confidence that resulted in their having control over the designs and arrangement of all building as well as the layout of the street system which is perhaps the least important part of the city plan if dealt with by itself. Thus Edinburgh has been built up on no one plan, but on a series of successive plans made at intervals during the sixty or seventy years of an architectural influence that few cities have been permitted to enjoy. The exercise of that influence, while it lasted, meant that the buildings, streets and bridges were treated as part of one composition, although given variety by topographical conditions and by reason of being carried out by different men at different periods. It meant that straight streets did not end in empty vistas but were closed by worthy terminal features of a monumental character, and that façades of streets and squares were designed as a whole in graceful outline as well as with pleasing and related elevations. It meant above all that a spirit of refinement and order became a possession of the citizens, who became in large part builders of their city.

It was Edinburgh's good fortune to have men like Robert Adam and W. H. Playfair as leading architects during its transition period. Adam designed Charlotte Square and the General Register House, and Playfair the Royal Institution and National Gallery, while they both collaborated in the University.

Probably Edinburgh does not possess a greater number of good buildings than the average city. But it has been guided in the art of displaying its buildings. As Ruskin said, of all the cities in the British Islands, Edinburgh presents most advantages for the display of a noble building. Other cities may not have the same natural advantages but many of them have not even seized such opportunities as they have, and this is the secret of their failure to escape from the commonplace in spite of huge expenditures of money in noble buildings. THOMAS ADAMS.

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DAPHNI—FROM THE ELEUSIS ROAD *Photograph by E. H. Lowber*

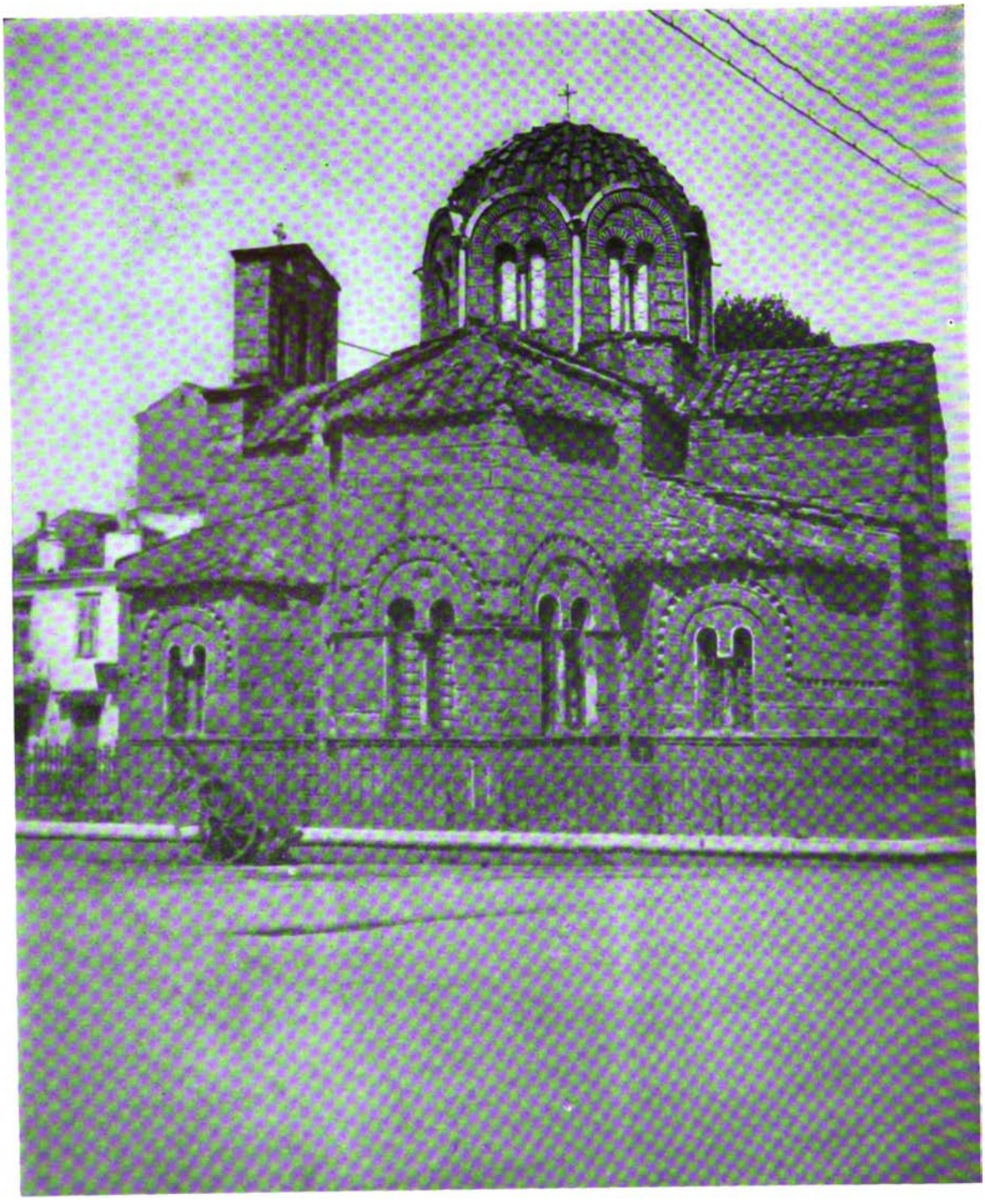
Little Churches in Greece

You can go on board at New York and go ashore at the Piræus: it is no more trouble than going to London, and not necessarily more expensive. For those who love the savor of a seaport, Piræus has its own charms, with tarred rope and sail-lofts, kegs of salt fish and barrows of fresh fruit, white new churches at the top of the steep streets and dim old dram-shops at the bottom; then half an hour in a motor or a little more in a street car will bring you into Athens.

Like Tiryns and Argos, like London and Rouen, and especially like Valencia, Athens is an inland town. Mountains lie all around, and you must climb to the steepest crests of the citadel to see the blue level water-line between the shoulders of the violet hills. It has not, I think, been felt sufficiently how the Greeks, with their pillared colonnades and porches bounded by wall and lintel, foursquare, could reckon on the rich curves of hills and soft contour of promontories, and sudden horizons at various and undreamed-of levels, to break up the even silhouette and complicate the unalterable ratios. In the thick air, the strong colors of orange-tawny stone and bronzed-black scrub and wine-red purplish water take their place with sun-steeped shadow and marbles translucent in the full blaze, so that a look, a single apprehension of the eye, absorbs the near and far as one, and the sky-line is a part of the portico as much as the frieze.

Standing in the short, sparse grass, strewn with marble fragments and starred with daisies yellow-stained like the marbles, the view can range and return, on mountains violet-gray or temples and theatres weathered tawny or coke-colored, on the blue smoke-like olive groves or the rich emerald of acacia plantations, on blond stucco house-blocks or turquoise pools beyond Salamis, through air that is like colored glass, so strong, so brilliant, so unexpected. From such a vantage the town looks fair and clean, with wide streets, white buildings, and everywhere, in squares

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S. Theodore—Athens
Photograph by E. H. Lowber

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DAPHNI—THE CONVENT YARD
Photograph by E. H. Lowber

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and gardens, along avenues, around suburbs, thick lines and clumps of green leafage.

All day and all night the wind stirs the murmuring trees with a noise like running water; and in the heart of the town, in the full of the day, the air is ringing with nightingales.

Every traveler who comes home from Athens, whatever else he brings, has two memories: this of the incessant nightingales, and another of the constant view of the Acropolis. From palace and hotel, from square and suburb, from little tables before cafés or from tobacconists' stalls on the avenue, you turn back and raise your eyes to rest on that rock, so high, so steep, so unexpectedly lovely with the broken ruins against the sky. I have often suspected that the view was lovelier so than before the Italians' gunpowder blew the close-packed mass of buildings into bits; just as I have often wondered in the country villages whether the average Greek peasant today were not a better fellow, on the whole, and more interesting, than those who came into the city to gaze at Pericles or laugh with Aristophanes. Certainly he is more like a brother.

Perhaps, in truth, he is very like, in aspect, in way of thought, as in race, to the hundreds who died nameless on the seashore under Troy; or who tramped in with a wreath of poppies or a plait of wheat-ears to Eleusis after harvest; or who, in the savage rocky fastnesses of Arcadia, paid their dues to Pan in rites that were ancient already when to Thebes came Dionysos with the sacramental Bull. And whether or not the Homeric heroes, and those of the Dorian Invasion, were blond invaders like Ostrogoths and Lombards in Italy, running like a pale flame over the land, burning on every acropolis, like so many altars, at Corinth, Thebes or Sparta, for something less than a millenium and dying down like fire in stubble, while the eastern races took back what was always theirs; certainly, like the mediæval, the modern Greeks are not Hellenic as the Homeric age was, or that of Pericles. They are perhaps none the worse.

The conquests of the Middle Age left daily life, for the most part, intact, and the temper of the country unaltered. If Norwegians and Normans raided in the eleventh century, if Frankish princes of Achaia and the Morea built castles and collected tribute in the thirteenth, till in the fourteenth the Catalans cleared out the remnant of them, and Genoese and Venetians commenced the slow imperialistic policy of aggregation that Italians have not yet unlearned, yet they left no mark, not any of these, on church or convent, on folk-

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EAST END OF THE KAPNI RAREIA

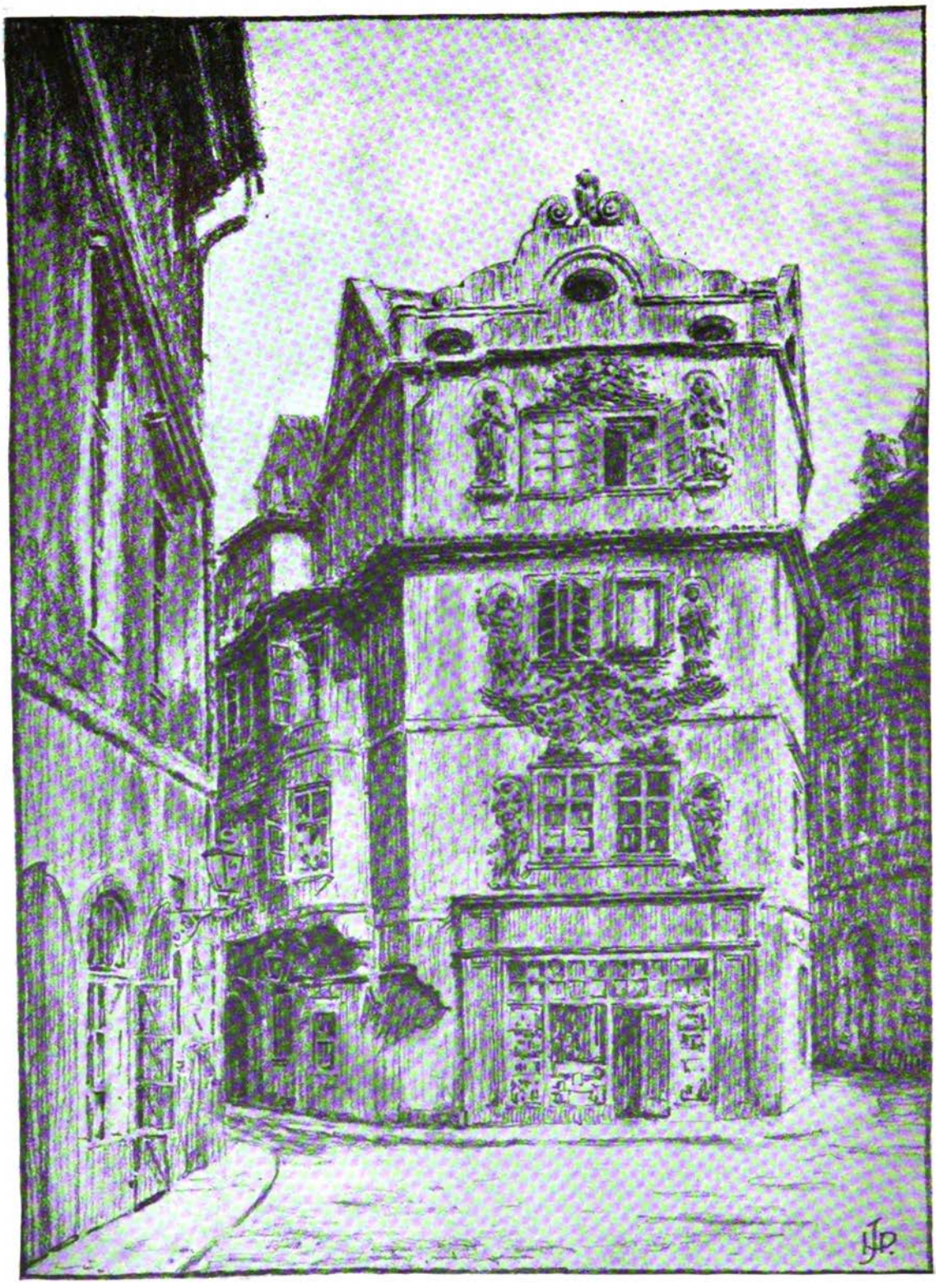
Photograph by E. H. Lowber

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DIE BURGSTIEGEN—PRAGUE
After the Drawing by Hans I. Philipp

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OLD HOUSE—PRAGUE
After the Drawing by Hans I. Philipp

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GOTHENBURG—APARTMENT DEVELOPMENT

Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

Housing in Sweden

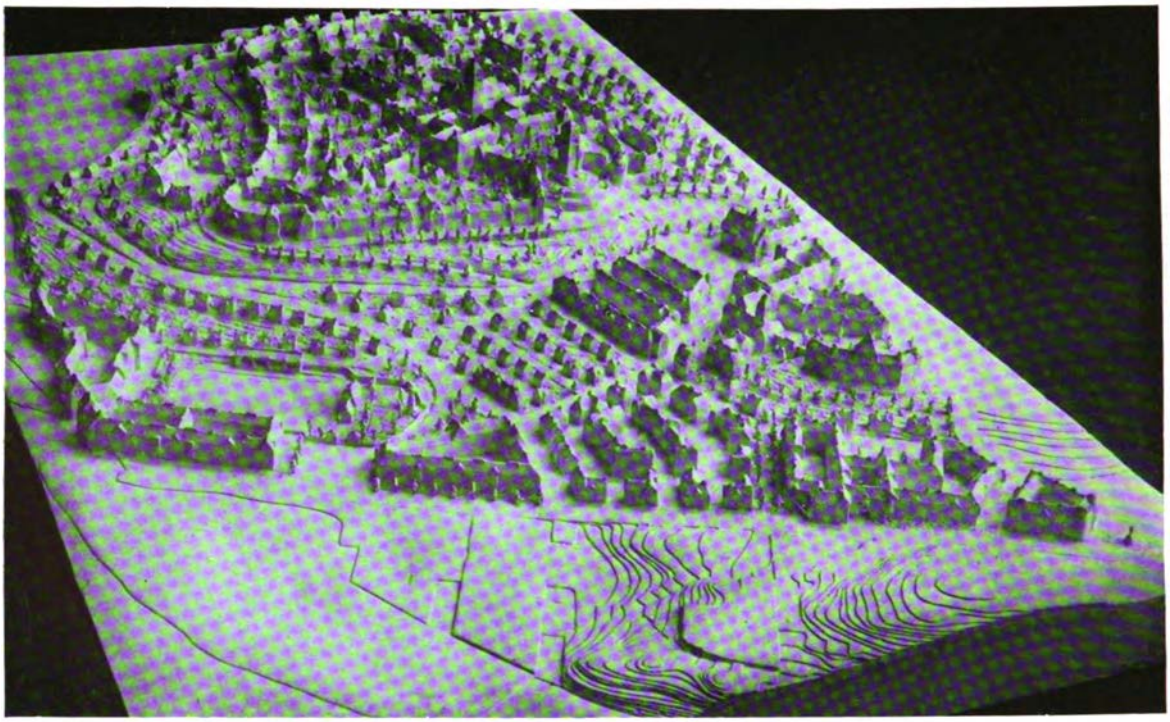
In 1917 the Swedish State found it necessary to embark upon the policy of subsidizing housing. It may be taken for granted that the measure did not meet with sympathy in all quarters, but it seems to have been generally understood and conceded that the extraordinary situation justified the extraordinary method.

Moreover, Swedes had gradually become accustomed to public intervention in this matter, and to the idea that housing need not be left entirely to private initiative. They had witnessed housing by the State (for its own employees) and a number of cities had already built houses, or had leased cheap land to home builders, or had granted building loans on easy terms. The State had



GOTHENBURG—APARTMENT DEVELOPMENT

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GOTHENBURG—MODEL OF KRISTINEDAL

especially encouraged housing in rural regions by appropriating considerable funds for this purpose; thus in all parts of the country there arose the homes of agricultural settlers, who were enabled to found an existence through the economic assistance of the State.

Such economic aid was extended also to industrial employers, who wished to erect houses for their workmen. Either with or without public support, many employers have provided housing facilities, which in some instances have been admirable both as regards quality and quantity. Cooperative housing, by workmen, also has been supported, and seems to have assumed even greater importance in recent years. Still it can hardly be said to be so popular as yet, among the Swedes, as in certain of the neighboring countries, such as Denmark and Finland.

As a consequence of this multiphase development the



STOCKHOLM—A GARDEN SUBURB

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STOCKHOLM—A GARDEN SUBURB TYPE



STOCKHOLM—TWO-FAMILY HOUSE

idea of housing as a public concern is now solidly founded in Sweden, most Swedes being convinced that the State has to fulfil certain obligations in this matter, in the interest of sound social development. This conviction has become firmly rooted notwithstanding the quantitatively rather small results of the recent State intervention. In reality, in the period of 1917-1919 the subsidized building operations produced merely about 14,000 rooms, while in 1912, 24,000 rooms were produced in Swedish cities alone. However, it should be noticed that the figure 24,000 includes all dwellings, large and small, whereas the figure 14,000 represents small ones exclusively. This gives significance to the figure 14,000, and if Swedes accept State intervention not merely as a temporary measure but as something of more lasting importance (this as an authoritative publication on housing says) it is because the real importance of the State subvention policy extends much further than is suggested by figures. "Its main result," this publication goes on to explain, "is that the housing question has practically become one of the most important branches of administration in every large community of any consequence. A productive housing policy of any considerable extent was carried on before the war only by the larger towns in Sweden; especially in Stockholm and Gothenburg have garden suburbs grown up that are of moment as pioneers. During and since the war, however, every Swedish community has been compelled to try to do something for the production of dwellings. For this purpose the Swedish towns have long had special advantages, as they have guided the development of building activity into new areas by means of great purchases and sales of estates and by their policy of town planning. Every Swedish town, as a rule, has long been a large landed proprietor." Evidently, Swedish municipalities are alive to the importance of a far-sighted land policy—the acquisition by the town or city of undeveloped land in such large areas that speculation can never again raise its head. In achievements along this line the two largest cities, Stockholm and Gothenburg, have especially distinguished themselves, and their example will be dealt with in the following.

Beside this arousal to the importance of the land question another notable result of the recent development is the indication that dwelling standards are improving. Public intervention as a means to achieving such results is being recognized as important even by those who otherwise are little in sympathy with governmental action. In the fight against overcrowding, increasing the dwelling space of the laboring classes appears as a principal aim. This is, of course, essentially an economic problem, but not exclusively so. Various factors enter into consideration. Noteworthy are recent remarkably successful results in reducing building cost through standardization methods and factory output. These questions have been studied of late in America by several experts sent by the Government or by private corporations. The special difficulty of the problem of dwelling standards no one will deny who is well acquainted with Swedish conditions, economic, social and climatic.

But the fight is on, and Swedes, recognizing that it is merely in its inceptive stage, certainly expect to achieve something along these lines.

Especially in the northern provinces there is much overcrowding in consequence of the hard climate that compels very substantial building, and demands the heating of rooms during many concurrent months, thus restricting dwelling space. This applies, though in lesser degree, to the rest of the country, to the milder southern regions, where five out of Sweden's six million people live.

Interesting is the perspective of the future, when the great water powers of the far north will be exploited on a much larger scale than hitherto, giving rise to more industry in these distant, sparsely populated regions that stretch up beyond the polar circle into the long, hyperborean night of midwinter. From the viewpoint of housing particular interest is attached to the present and future outposts of Swedish industry in these regions. Here industrial life is carried on under conditions very different from those which we generally associate with the development of great industry. On the whole, the much-industrialized Sweden of today is fortunate in having escaped the horrors of the extensive, densely populated industrial conurbations, such as are to be found notably in England and in Germany.

In judging Swedish industrial housing conditions this is not to be entirely forgotten. Above all, sweeping generalizations should be avoided because of the actual variations.

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There is reason to remember the rather marked difference between the smaller towns and the larger ones, in general. A great part of Swedish industry is, as already intimated, scattered over the country in rural regions. The smaller cities, except a few, have very little industry. If we now examine those larger cities, which may be called industrial, we find that their housing conditions are especially characterized by a predominance of large tenement houses. Indeed, the most unfavorable impression of Swedish housing conditions is the extent to which the larger cities consist of more or less overcrowded tenements. There is much overcrowding also in rural districts, even more than in the towns, according to statistical indications, but statistics do not reveal that the overcrowded urban tenements constitute an evil even more difficult to combat. However, where statistics are silent, public intervention gives reliable testimony. We find it in the special energy with which the attempts at reform are aiming at combating the overcrowded urban tenement. Measures constituted to further this aim are: The municipal land policy, governmental and communal loans and subsidies, legislation regarding lease-hold of land and regarding inspection of dwellings, revisal of the city planning law, and of the national building act.

The progressive tendencies of Swedish city planning legislation, in the sense in which "progressive" is here taken, can merely be indicated. For the moment stress should be laid on those measures which aim at aiding construction, that is, the public loans and subsidies, and the communal land and construction policy. State subsidies and loans, aggregating about twenty million kronor

(*Continued on page* 26)



GOTHENBURG—BLOCK TYPE DEVELOPMENT—MUNICIPALLY BUILT AND OWNED

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Little Churches in Greece

(*Continued from page* 16)

lore or folk-song. Not saintly legends, nor yet embroideries, nor the weaver's or the potter's craft, were altered by a detail, in name or shade or curve. Neither architecture nor painting shows a mark where the iron-shod heel was set down. The little mediæval churches of Macedonia and Greece look back eastward for their sources further even than Byzance. If the folk came from north of the Black Sea, the major arts came from the opposite shore and adjacent parts, Anatolia and Cappadocia, with something from Antioch and from Alexandria.

The traveler in Athens is likely to overlook these little churches altogether, unless in shopping he stumbles over one in the middle of the street. Like Hecate at the cross-roads, the Panagia is worshipped where men go by and turn and return again. The same is true of the church called Kapnikareia, of S. Theodore, and S. Nicholas. The level of the city has risen about them, so that they are set in a sunken area and entered by going down two steps or three, into the dimmed ante-chapel or narthex, whence doors open upon the fragrant darkness of the church. The lustre of metal, bright brass, fresh silver, burnished gold, filagree, repoussé, gem-set; the dark lacquer tones of the iconostasis, bronzed greens and sullen reds, blues dark as the night sky and like it gold-dusted; browns of copper and rust and tan-bark—these hang in the memory, veiled by warmth and incense and taper-smoke, and the smell of the yellow candles. Oh, that odor of the virgin wax, with which Greek churches are charged! In the imprisoned light the eye perceives barrel vaults that brood, and the lift of a central dome, and lower spaces, as though more private, in the angles; through pierced circles in the window-slabs a ray gleams but no more; and colors and forms of wall and vault are dark and vague and taken for granted in the perception and the recollection. Everywhere is space enclosed, made palpable, encompassing and sheltering, yet not cramped or oppressive: rather, quieting, amplifying, alluring the mind to reverie.

We have all known houses—it is indeed the ideal of a cottage—where the interior is much larger than the exterior would betray: well, these churches that seem so tiny, there in the middle of the roadway, once entered are spacious enough. This is the converse of St. Peter's at Rome, where the guides boast that you cannot feel how large it is: this is the opposite of the cathedral in New York, that seems so much smaller within than the gray mass looming above Morningside.

The Old Cathedral of Athens is the eldest of all these. Pure in type, built in the ninth century of white marble, it incorporates in the walls slabs of many epochs and at least three religions. Across the west end stretches an antique calendar, where, on the wide architrave, among pagan emblems of the months, crosses are interpolated; below the frieze, on either side, over the arch of the door and along the south side, slabs are ranged symmetrically. On some is symbolized the triumph of the cross, where lions are adoring or roses are displayed; on others a different tree of life is flanked by girl-faced birds, or lions bearded and human-headed, carved by the devotees of Isis whose chapel once stood close by; stepped crosses like those at Mt. Athos or Armenia, slabs of interlaces like those at S. Marco. All these, with a dead Greek's tomb-relief that Praxiteles might have seen carved, with other devices past telling or divining, hold up the walls and enframe the doors in exquisite stained marbles. Pleasant coppery tiling covers dome and gables and roofs at all their various levels, even to a special half-pyramid over the semi-hexagon of the apse. The strong barrel-vault of the nave that is carried through the narthex gives the dominant, and the dome itself wears structural parts and no more, eight stout arches on columns, the stonework pierced for windows on every face, and the exterior surface of the vault curving smoothly as a pomegranate to the crowning cross. This is the style that at Zamora above the Duero looks so indescribably oriental in the heart of Spain. Here, in its own land, the touch of quaintness that the reliefs impart cannot mar the justness, proportion and lovely quietude of the whole.

S. Theodore is nearly as pure and only a little less primitive, though dated 1049, built of stone, with a string-course of bricks set in saw-tooth around the middle of the walls, that rises over windows and sometimes reduplicates between them. Three apses make up the whole east end and rise almost to the eaves; all the windows, including those of the dome, are conceived with two equal stilted arches separated by a shaft, the spandrel above these and under the main arch being filled in with brickwork cunningly laid. The strong gables, the dome, the narthex still treated as continuing the interior in repetition of its levels, are only less interesting in the brown-grey stone and brick of the exterior than within, where barrel vaults are run now east-and-west, now north-and-south, and the aisles open wide upon the narthex and that upon the street, by three doors in the west wall. Just inside, if memory serves, stands a silver-faced icon of the two SS. Theodore, warrior horsemen both, with flying cloak, who are indeed the Great Twin Brethren invoked by antiquity on many a battle-field, who were worshipped at Sparta before the Dorian came down. Except in name, and in fashion of armour and weapons, you could not tell the Heroes of one cult from the Saints of the other.

From outside, the Kapnikareia would appear to have started with much such a church as these, excepting

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that the narthex gables, and those of the sanctuaries, were lowered a trifle, and the central apse broadened, giving three lights to the window there, and the string-courses multiplied; then another narthex was laid across the west end and turned up along the north side, graced with four western gables and a gabled southwestern porch, and a dome in the centre of the north. Inside, however, the eleventh-century church explains itself as essentially cruciform, of four barrel vaults, the members in the angles sustained by columns at the crossing. The planning results in a delicious elusive mystery-shrine, where something is always out of sight or unexpected; and the walls within seem hardly more than piers and screens; and brickwork without is cut and set like spells in Cufic lettering.

These churches, then, all manifestly reveal themselves more and more as sanctuaries of a religion of the mysteries, with inner shrines and sacramental arcana far withdrawn, with chambers for the adept and a space for those not yet initiate, and outer halls and vestibules where those indifferent or undetermined may subject themselves to influences from within, and listen for the voice that speaks only in the hush. Not so much the grace of recollection is fostered here, as the poignant and insistent power of sacraments and secrecies, drawing, uplifting, bemusing, and at last satisfying.

The grace of recollection, however, may well be sought in Daphni, that lies half-way on the road to Eleusis. Built at the very close of the eleventh century, so that the gold mosaic derived straight from Constantinople was designed and set within the limits of the twelfth, the convent came thereafter to serve for sepulture to the Frankish Dukes of Athens. Two years after it was commenced (in 1062) the Normans had been beaten off from Larissa in Thessaly; perhaps they saw there also and carried off in memory the triple windows higher at the centre, which figure in the apse and transept faces at Daphni, and were to grace at Caen the clerestory of Duchess Matilda's abbey and that of William the Conqueror.

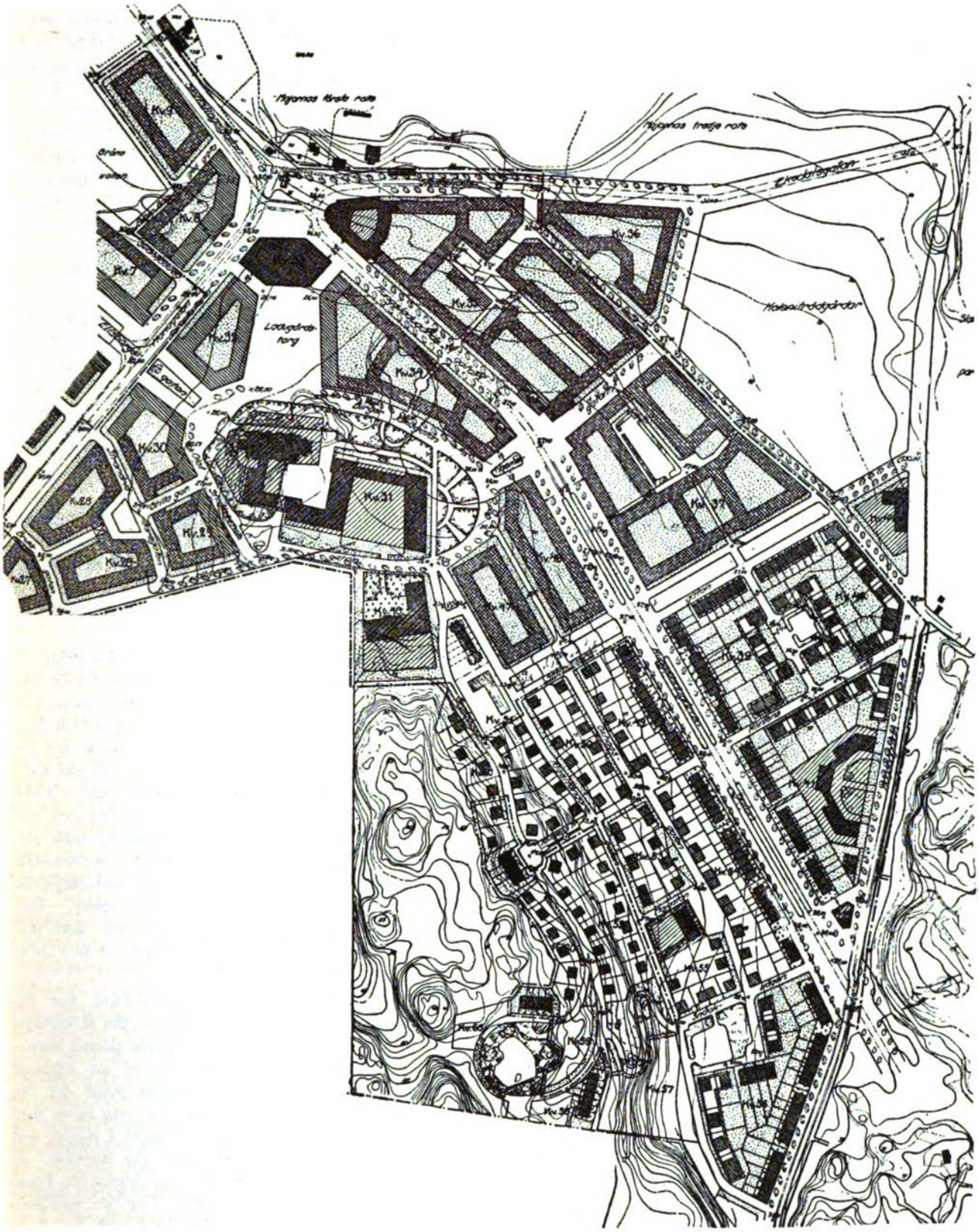
To see the steady advance of the style, in progression through these Greek churches, is easy; how they grow larger, serener, more centripetal and more secure. Here the dome is carried not on Byzantine pendentives indeed but on oriental squinch-arches at the angles which mosaic covers and disguises, and eight piers sustain it above the central space. The function of buttresses is met by the mighty arch which rears itself up all the transept face to turn just under the eaves, enclosing door and windows as in the Romanesque building of central France; the string-courses encircle the whole of the window; a band of brickwork runs around the apse; a marble cornice goes along and about the whole.

Here the dome is the main interest. Four lofty arms reach out, cruciform, to make the barrel vaults of transepts and short nave and sanctuary; low western cross-vaulted aisles correspond to the flanking apses, and a second parallel pair of aisles, free and spacious, abutting the transepts where these cut them, and the two-storied narthex which they continue, show how the five-aisled church was adjusted into a plan highly centripetal. The sanctuary broadens into shallow niches at right and left, under such shallow semidomes as recur at the western end, but converge there upon the doorway to the narthex, precisely as nearly four centuries later the great mosques at Constantinople adjusted dome and successive supporting semidomes to a rectangle; both forms indeed deriving directly from S. Sophia. These mighty curving surfaces of deep dome, wide semidomes and lofty barrel vault, covered all with gold mosaic, would well become our own churches, for the eye rests on them in pleasure and is drawn ever toward the centre; the story they tell is of the Lord of All, *Christos Pantocrator,* abiding at the heart of things, sustaining the fabric of the world, while about him range his ministers and servants, distinguishable each from the other by dress and symbol; and in the outlying parts narrative scenes relate what all men ought to remember. In the narthex the heroic tone is exchanged for the lyrical, and the life of the Mother is unrolled in delicate sequence.

About thirty years ago restoration became necessary, and was accomplished with discretion so far as the church is involved; the buildings of the monastic group, however, are falling down, with the walls that once enclosed them. Tourists tramp and huddle through the little courtyard without an eye for its pollards, cypresses, and eucalyptus, or the outside staircase leading along the church wall to a gallery by which the monks in the eastern range of cells were wont to come and go. If they have motored down from Athens complaining of the acrid dust, they have missed all the strangeness of that world of red-and-black in which they moved; red rock and black cypress, red earth and black juniper, and sparse poppies red as those that dye the field of Marathon; with groves of those little Greek pines that look like the Japanese, delicate-leaved, where the trunks twist and the foliage is a feathery silhouette as you look through. Few flowers are there; broom flaunts scant yellow blossoms by the roadside, and around the marble well, outside the convent, may be found a small scabious and the constant, elusive blue eye of love-in-a-mist. The wise will stay half an hour, quietly sitting on ancient marbles among the voiceless cypress trees, or in the hushed pale-lighted narthex, or under the brooding glimmer of the dome, with its imperturbable figures about them, to wonder about the Victim, who is also the Redeemer, the Mother who has lost her child, before motoring onward to Eleusis. For, as a French Academician once remarked, religions may change, but worship is the same.

GEORGIANA GODDARD KING.

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GOTHENBURG
Plan of a Municipal Development

DEPARTMENT OF ARCHITECTURE
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Housing in Sweden

(*Continued from page* 22)

yearly, have been granted to builders of such dwellings, almost exclusively to communal or semi-communal enterprises, "own-a-home" associations, and to cooperative building societies. Urban agglomerations of all kinds, as well as many rural communities, have enjoyed such loans and subsidies. Regarding the results no complete statistics are as yet available, but figures obtained so far indicate that operations subsidized by the State produced about fifty per cent of all the dwellings erected in Swedish cities during the period 1918-20. The significance of this figure lies in the character of the houses it represents. The State has not subsidized the creation of tenements. Subventions have been granted only to builders of houses containing one or two dwellings. Besides, the State has, in recent years, constructed dwellings for its own employees on a larger scale than previously. Still in 1916-17 such production represented merely two or three per cent of the whole output through public operations. In recent years it has risen to about ten per cent.

Among municipalities that have been especially active, the city of Gothenburg (about 200,000 inhabitants) is a notable example. Gothenburg has, like many other cities, not only built on its own account, but has also granted loans or subsidies to home builders, and has ceded, or leased, or sold land on easy terms, or has guaranteed building loans. In the period 1915-1920 this city erected 1,080 dwellings at an aggregate cost of nearly 6,600,000 kronor, of which 420,000 were provided by the State. The communal subsidies granted to home builders amounted to 818,000 kronor, the loans aggregated toward 4 millions, the land ceded to home builders was valued at nearly 700,000 kronor.

Finally, Stockholm (about 420,000 inhabitants) has achieved results along the same lines on a similar scale. Like Gothenburg, Stockholm has in the same decade made great acquisitions of land, so that the city now owns outlying grounds for housing purposes, larger than its built-up area. As land values and rents are very high in Stockholm, the significance of this policy is well illustrated by the fact that the extensive grounds, acquired about ten years ago, cost merely .072 cents per square foot. Their aggregate value at the time of purchase was toward 12 million kronor, their total area being over 9,000 acres. The city, besides possessing much ground in its densely built-up area, also owns other outlying tracts of about 18,500 acres, and thus may certainly be considered as one of the greatest land-owning municipalities in Europe.

NILS HAMMARSTRAND.

Our Modern Style

Is there not something a little suspicious in the sudden awakening of our critics to the fact that America has developed a unique architectural method and style? The history of architecture in this country should put us on guard against attaching much importance to contemporary estimates of its value. With a little effort one may recall that the brummagem Gothic of the Smithsonian Institution was hailed as an honest return to nature by Robert Dale Owen, who had much to do with the design of that building, and that the ponderous masonry of Richardson was regarded by the Gilded Age as a National Style, rather than the accidental development of a single personality. Indeed, our best periods have not been conspicuously given to self-esteem: the crafty vernacular of the seventeenth century and the remarkably intelligent "vernacular" developed by Stanford White and a few others in the late 'eighties for the shingled country houses of the seaboard have never received the praise that they deserved.

It is in our metropolises, with their skyscraper developments in office and loft and apartment house and hotel, that our critics find the evidence for a genuine modern American architecture; and I cannot help thinking that they are looking in the wrong place. The economic and social reasons for finding the skyscraper undesirable were admirably set forth in a recent issue of the JOURNAL; but the esthetic reasons are every bit as sound. In a recent article in *The Nation,* Mr. Henry S. Churchill has said all that can be said for decorative and structural aspects of the "Temples of Mammon" that are now supplanting the "Temples of Ammon"; but his praise boils down to the fact that the skyscraper has ceased to be as bad as it was when it was first constructed.

It is true that the uneasy hemming and hawing of ornament which once agitated the whole façade has now given way to a concentrated gesture about the entrance and the pinnacle; and buildings which had been designed in a topheavy fashion out of a desire for floor space and rents have now, as a result of the zoning laws, taken the form of a tower or pyramid. That this is something of an advance is beyond dispute; one need only compare the Fisk Tire Building with the United States Tire Building, representing respectively the later and earlier works of the same architects, to see what a virtue can be made of legal necessity. But a great architecture is something to be seen and felt and lived in; and by this criterion most of our pretentious buildings are rather pathetic.

When one approaches Manhattan Island, for instance, from the Staten Island ferry or the Brooklyn Bridge the great towers on the tip of the island sometimes look like the fairy stalactites of an opened grotto; and from an occasional vantage point on the twentieth floor of an office building one may now and again recapture this impression; but need I point out that one can count on one's fingers the number of buildings in New York that one can approach from the street with similar satisfaction? For the millions who fill the pavements and shuttle back and forth in tubes, the skyscraper as a tall cloudward building does not exist. Its esthetic features are the entrance, the

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elevator, and the window-pocked walls, seen close at hand; and if there has been any unique efflorescence of taste or beauty at these points I have yet to discover them. What our critics have learned to admire in our great buildings are their photographs—and that is another story. In an article chiefly in praise of the skyscraper in a recent number of THE ARTS the majority of illustrations were taken from a point which the man in the street never reaches: it is an architecture, not for men, but for angels and aviators!

If an architecture is to be experienced directly, and not through the vicarious agency of the photograph, the skyscraper defeats its own ends; for a city built so that tall buildings could be approached and appreciated would have avenues at least as wide as Longacre Square; and a city so generously planned would have no need for the sort of building whose sole economic purpose is to make the most of monopoly and congestion. I say nothing about the way in which these obdurate, overwhelming masses take away from the little people who walk in their shadows any semblance of dignity as human beings: is it not inevitable that one of the greatest mechanical achievements in a thoroughly dehumanized civilization should—no doubt unconsciously—achieve this very purpose? It is enough to point out that the virtues of the skyscraper are mainly exercises of technique; they have precious little to do with the human arts of seeing, feeling, and living, or with the noble architectural end of making buildings which stimulate and glorify these arts.

A building that one cannot see, a building that reduces the passerby to a mere mote, whirled and buffeted by the winds of traffic, a building that has no accommodating grace or perfection in its interior furnishing, beyond its excellent lavatories—in what sense is such a building a great work of architecture, or how can the mere manner of its construction create a great national style, were such an end desirable? Consider what painful efforts of interior decoration are necessary before the skyscraper apartment houses can recapture even the faded perfume of a home. Indeed, it takes no very discerning eye to see that in a short time we shall be back again in interiors belonging to the period of the whatnot and the ottoman, in order to restore a homely sense of comfort to the eviscerated structure of a modern, fireproof apartment. What chiefly distinguishes our modern American work from that of the disreputable 'eighties, is that the earlier architects were conscious of their emptiness and attempted feverishly to hide it; whereas our moderns do not regard emptiness as a serious lapse, and are inclined to boast about it.

There is a sense, of course, in which these modern Collossi express our civilization. It is a romantic notion, however, to believe that this is an important or beautiful fact. Our slums express our civilization, too, and our rubbish heaps tell sermons that our stones conceal. The only expression that really matters in architecture is that which contributes in a positive way to the good life; that is why there is so much beauty to the square foot in an old New England village, and so little beauty to the square mile in our modern metropolises. A building stands or falls, even as a work of art, by the city that surrounds it. When intelligent city planning restores our sense of the human scale, and the design of each particular building is made commensurate with the purpose and function of the city as a whole, the intention of our modern style will perhaps be realized. LEWIS MUMFORD.

"Beating the Architect"*

"A shameful incident has just come to our notice. A Lutheran congregation decided to build an imposing church. They retained an able architect, who is a member of the American Institute of Architects, and told him to prepare plans. They were willing to spend enough money to put up a church of real merit, and of imposing size.

"The architect gave his entire time to the project, for a number of weeks. He turned down all other work, so that he might give the best that is in him to this project. He advanced the money for his draughtsmen's time, his engineer, his stenographer who typed the specifications and to the company that furnished the drawing paper, the tracing linen (at $1.25 per yard), and printed the blueprints for him. He advanced money for preliminary surveys and topographical surveys, and for various fees at the city hall and court house.

"After the congregation received the drawings, the matter came to a standstill. The architect figured up the actual amount of money which he had advanced. It amounted to a little less than two thousand dollars. He waited some weeks, and then presented the bill. The congregation flatly refused to pay a cent. They have abandoned the project, for the present at least. They were only after ideas, anyway. And these they got at the expense of an honest architect, who advanced almost two thousand dollars out of his savings account, to give the congregation their desired ideas.

"This transaction is an outrageous one. It is a disgrace to the Lutheran name. And we say, with shame, that it is a Lutheran congregation that turned this infamous trick.

"Such cases are not as rare as the outraged reader may suppose. We have just been busy, acting as referee in another one. One of the congregations on our list of applicants, a Lutheran congregation, came to us with their troubles. They had retained an architect to prepare drawings for their church, which he did. They decided not to build and discharged their architect. They paid him half of what they had agreed to pay, and refused even to return his drawings. And they wanted us to assist

* From *Lutheran Church Art*, November, 1923.

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them in preventing the architect from getting his drawings back. It seems that they had found a jerry-builder, who promised (with the aid of shams and substitute materials) to build a flimsy shell of a building for less than their architect's drawings were estimated. And to save the architect's one per cent supervision fee they discharged him.

"It is hardly necessary to say that the secretary of the Committee on Church Architecture brought pressure to bear on this congregation, which resulted in a settlement with their architect and a return of the drawings. No, such cases are not rare.

"A great Lutheran church was dedicated some time since, and its pictures published far and wide. And thereby hangs a tale. Their architect labored hard for two and one-half years. He paid office help in good money and advanced all the other money for getting out the drawings and seeing the work to a successful finish.

"The church was dedicated with great bombast. There was an imposing processional of vested singers and many robed clergy. But the poor architect, far back in the great church, was not happy that day. The congregation had whittled him down on this point and that, caused him to subscribe to this fund and that, and finally caused him to put in a memorial window. Deducting all gifts, contributions, discounts and the cost of the window, the architect had exactly $800 left as his total commission, $800 for thirty months' work. What architect can pay draughtsmen's time, office help, engineering and blue printing, to say nothing of office rent, for $26.66 2/3 per month?

"Whenever we see the picture of that noble church, we cannot help thinking that it cost the congregation but $800 in architect's fees, whereas, by all honest calculation, it ought to have cost them, at the very least, $8,400 for architect's services! What stories are behind some of our fine churches, and smaller ones as well!

"A fourth Lutheran congregation, one with which our Committee has had dealings, asked a craftsman to design certain parts of their interior. He spent some time doing this, and sent them the drawings. They not only refused to pay him for his designs, but they turned them over to ignorant laborers, to execute in imitation materials!

"A fifth congregation, desiring a most elaborate window, asked for a large, special design, in colors. It cost the glass worker nearly $500 in actual cash, to say nothing of five weeks' wasted time, to get it out. He sent it on, and that was the last he ever heard of it. These good people also 'just wanted to get ideas.'

"A sixth Lutheran congregation had special drawings made for their church. After some time they sent them back with a brief note that they were not suitable. They did not pay for them. But it seems that these people, also eager for 'ideas,' liked the design so well that they had somebody's draughtsman get out drawings at a nominal price. They cribbed the whole thing, and at the expense of the man who got out the drawings in the first instance.

"We have a few more choice instances in mind, but let us drop this dangerous subject. Some architects and craftsmen have said bitter things on the subject of honesty. One well-known architect, who has built at least one well-known Lutheran place of worship, has quit entirely. He said: 'I'm through. Church people will beat you every time.' And so he sold his collection of books on the subject and gave his attention to other things. Another architect, and a prominent one, has thousands of dollars on his books. It is money which churches are 'holding back' for one reason or another. Every letter from him brings back a request that he 'deduct a few hundred dollars because it's for a church.' 'You are helping along a good cause,' they tell him.

"We will try to be charitable and say that in many cases it is thoughtlessness. Congregations do not realize that it costs an architect close to six per cent to get out the designs for a new church and to attend to a multitude of other things connected therewith. If your church costs you $100,000, you may rest assured that before dedication day your architect has paid close to $6,000 out of his own pocket to make it possible. And is he not entitled to a small margin of profit, above bare expenses? It costs a glass man a great deal of money to prepare a carefully designed drawing, in colors, or to 'make up a sample,' and perhaps to travel two hundred miles to confer with your committee. Let us get these facts fixed in mind, so that we may deal honestly with all those connected with our building project. There is no harm in 'just getting ideas.' But we ought to be willing to pay for such ideas. It is dishonest to get them at the expense of others."

The Architect's Office

Its Organization and Management

In developing the practice of architecture one is confronted first with the almost universal idea that the great masterpieces of architecture were the results of the genius and unaided efforts of individual architects. It may be true that "a great work of art as a rule comes from a single brain," but a historical survey of architecture shows indisputably "the cooperation of many minds in the design and execution" of most works of importance. This old idea of many minds collaborating is the keynote of all modern building, and as time goes on, more and more will this coordination of efforts obtain. One is inclined to feel how simple were the problems of the old-time architects compared with the complexities of the modern practice. How short a time it is since the invention of the plumbing fixture developed a complicated piping and tanks and valves and pumps and what not and started a science of sanitation and a new engineering profession! How short a time it is since steam became the foundation of our heating systems and had to be piped about our buildings and the science of heating and ventilating was begun! Only a few years ago steel revolutionized the entire constructive methods of building and the

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structural engineer came into existence! It is not long since electricity took the place of gas and became an inseparable part of our life. Electrical engineering became necessary in our buildings. How long is it since the elevator brought its added complexity of making us design buildings in unheard-of vertical dimensions? How long is it since the necessity of creating dividends enforced the necessity of knowing all about the costs of using and maintaining buildings and of their exact adaptability to the purposes for which they were to be used; from this has grown the science of industrial engineering and the industrial expert is a part of the building operations. Many of these new sciences and arts require years of study and application to apply properly and efficiently, and they have become serious and separate professions, growing side by side with that of architecture, and because they have not had time to acquire traditions they are growing faster than the older profession.

The Architect at the Helm

The burden of knowledge required for any serious building operation has become too great for any one mind to carry, and therefore the modern building operation is now necessarily one of cooperation of men of many talents, each expertly informed in his art or science. The architect still remains the designer of the building; its conception is of his brain, the execution of it remains in his hands as the master coordinator of the diversified arts and sciences inherent in the building and of the experts who apply them. The architect accepts these aids in his work and must give them due credit and responsibility. He must himself learn the principles of these new sciences which so vitally affect the success of his project, in order that he may coordinate them intelligently into his design. His education and training must be more exact and his apprenticeship longer that he may qualify in the competition of the professions.

The New Social Exactions

The qualifications required of the architect of today reflect the added responsibility imposed by modern industrial conditions, in that a third qualification representing some of these new responsibilities must be added to the two old primary qualifications to practice. Briefly stated, these three fundamental qualifications are: First, knowledge of the principles of design, which is based upon the accumulated knowledge of many centuries of study of scale and proportion. Second, knowledge of construction, which must be ever more technical and exact as the sciences become more specialized and ever changing as new materials and methods are developed. Third, knowledge of economics, which must include exact knowledge of the cost of materials and labor, the availability of each, the costs of the operation and maintenance and of the depreciation and obsolescence of buildings in order that they may be of permanent value in the economics of society. Of these three fundamental qualifications, the first alone is never changing except as the old principles of design are applied to meet the requirements of economics and new construction thought; construction constantly is becoming more complex and exact, as it must meet the requirements of use and the economics of industrial competition; economics is ever alert to develop new properties, and sure vision and exact knowledge must go hand-in-hand. The modern architect must, therefore, know design as the foundation of all permanent beauty in building; he must know construction, as that "is and always must be the essence of good design and any vital architecture"; he must know and understand the economics of modern living and business, because the complexities of modern business are reflected in the problems to be met by him in a degree that will tax his entire ability, for the bulk of modern buildings must be economically successful in order that any permanency of life be given them.

So the practice of architecture has grown out of the older simplicity into the modern complications. It has not willingly grown, but has been forced to do so in order to keep its life. A profession governed so largely by tradition as is architecture is ever conservative, and takes unto itself new thoughts, new responsibilities and new methods only with the utmost deliberation, showing the greatest reluctance to accept the new ideas of practice and the new responsibilities which the newer professions of science and art greet with acclaim. In the contest between the efficiency of science and the inefficiency of tradition, the public mind has turned to science with profound respect and the architect must needs create new tradition for his profession.

The Client

Although the architect has assumed new responsibilities without number, his relations to his client and the fundamental functions of his practice remain unchanged. He is still primarily the Adviser of his client as to the proper solution of the building problems; simultaneously, in many instances, he is the Agent of his client because of his dealings with other persons on his client's behalf; he remains the Interpreter of the contract as it controls the erection of the work. In this latter capacity he acts quite apart from his other two fundamental functions, and represents in this responsibility both his client and those who are constructing the building. In the exercise of the third of these functions by the architect his exact knowledge of modern materials and constructive methods and his integrity of purpose is severely tested, and the pressure of the constructive industry today is being strongly brought against this third function, in order that his finality of decision thereunder shall be limited to certain aspects only of the contract documents.

Administration of the Completed Building

These, then, are today the fundamental functions exercised by the architect. Do not industrial conditions indicate a new function which more or less will be assumed by the architect—that of continuous administrative duties of operation and maintenance after the building is completed? The time does not seem far off when this new function may become as important as is now the administration of construction work.

The Building Industry

In the construction industry the relations of the architect to contractor and manufacturer and to labor have become far more closely interwoven as materials and

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methods have multiplied. The building operations of the past, if of any importance, took years of effort under hand labor conditions; the modern building is built with tools and mechanical appliances, and its construction is a matter of months instead of years. The architect must ever keep ahead of construction, and no longer is a baker's dozen of buildings a life's work for him. The duration of the building operation and the economy of its erection are dependent as never before upon the architect's knowledge of the conditions of the material and labor markets and of the adaptability of the various constructive methods and mechanical appliances to his project in hand. The proper co-ordination of the various parts of the structure and the trades concerned is a matter of vital importance to the architect and the owner as well as to the contractor. Thousands and thousands of dollars are spent to no avail because architects, through ignorance, cowardice or deliberate intent, do not perform their duty of advising the owner as to the best and most efficient and economic solution of his building problem and its cost, or of interpreting fairly the conditions of the building contracts during construction.

Thus because of the diversity of the requirements of industry, the rise of the new sciences applicable to building, and the complicated economic problems of modern buildings, the practice of architecture has itself become an industry. It no longer has the simple responsibility of many other forms of art—the painting, the picture, the sculpture, the poem, the tragedy, are still individual simple expressions of the arts, and society is not particularly harmed if any of these be not successful. Not so is it in case a building fails to function! A building operation has no longer, and never can have again, simplicity. Forcing the architect to become a part of its economic life, society demands that he must assume great economic and educational responsibilities; how long the architect will continue to lead in developing an ever-increasing appreciation of pure beauty in the fine and applied arts will depend entirely upon his acceptance of these new responsibilities and his management of them.

Construction of buildings is assumed to be the second greatest industry in the United States. Statistics show that the planning and direction of the construction of a vast volume of this work is passing out of the hands of the independent practitioner in architecture. The competition of the more exact sciences, such as structural and industrial engineering, is pressing and increasing, and if the architect desires to retain his place in this vast industry and his independence, he must revise his traditions and his obligations and give service in the form demanded by the business world. Competition from these sciences is as severely noted by the architect whose practice is so limited that he himself is the entire office and working plant, as it is by those offices which have expanded into great organizations to meet the calls upon them. The pressure of the building company, the ready-cut company and the mail order catalogue, is just as ominous to the builder of homes as is the competition of the engineering professions to the architect of great commercial buildings. The architect will survive as the creator of the mass of our homes and commercial structures only as he manages to render greater service to society than do the competing sciences. If he cannot expand his profession and practice so as to give the services as, when and in the form required by modern business competition, architects will become luxuries, and the practice of architecture as an independent profession will become more and more limited to those who can afford and do indulge in luxuries.

All this the profession vaguely senses; while loath as a body to face the issue squarely, many individual practitioners are accepting the challenge and are endeavoring to find a way to meet the severe competition and retain the essential traditions of the profession. "The public does not understand architecture" nor "does it understand why an architect should be called to design its building work," will be the complaints of the profession until, by the service it gives, it forces its own recognition upon the public mind. Beauty of design and the art of architecture in the abstract and of themselves will not interest society in architects for many generations.

Organization

Architecture has then become a business, and, as it is our hope that all business will finally realize that beauty of design in its products actually enhances the economic value of those products, and as the principles of design and applied arts taught the architect beauty of design of industrial products, it is paramount that the architect, as a professional man, accept the conditions imposed by industry and render a service and an example so noteworthy that industry will be guided by him to give that beauty in all man-created things which the developing art-sense of our people eventually will demand.

Andrew Carnegie is credited with saying that if he had to lose his plants or his organization, he would prefer to lose the former; plants could be the more easily replaced. He meant that organization is the foundation of business. Upon organization depends the service given, and upon service depends the vitality and the life of the business itself. No business ultimately can live that does not give the greatest amount of the most exact service possible for the amount of remuneration received therefor. Service depends upon organization, organization depends entirely upon management. The skill of management therefore will be directly evidenced in the service given; the better architecture is managed as a business, the greater service it will give and the more stable and sure will become the foundation upon which it can surely grow into and become a vital and dominant force in business and in society.

Management requires integrity, high ideals, common sense, exact knowledge, competent counsel and planning and a square deal that the organization may reach its highest point of ability to give service. Management must leave nothing for chance to decide. In architecture it must carry out the conception of the architect as expressed in pure design into a completed building by finding the best and cheapest way of accomplishing that constructive operation and providing the means of so doing it. Management fixes the earnings of the architect and as an architect must make his living from the earnings of his practice that living will be dependent upon how carefully he organizes his work and how efficiently he manages that organization.

The architect whose office is himself should seriously

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undertake the organization of his time and his energy. Steady development of orderly arrangement will give a certain path to efficient service. The architect who has large and important work has but grown up from the small beginning, and if during the lean years he has developed an orderly procedure of doing business based upon the well-thought-out organization scheme, he can assume the management of the larger organization with full confidence of success. In the future, just as now, variations in fees received by the architect for services rendered by him will always obtain and more and more it will become a custom that the amount of remuneration received will be governed entirely by the quality of the service he renders, and careful management will be increasingly necessary. The architect need not worry about the size of the fee; society always will pay adequately for services rendered to it if those services be what it desires.

An architect with an exhausted bank account needs organization and management more than the one who, with ample capital, can absorb the unnecessary costs of his practice. The architect who has built up a business large in volume has done so often without a definite program of organization. He has created his business—he has nourished it and built it up and is very apt to feel that the service he has given is the best that can possibly be given. Often it is the best under his methods of operation, but is it, when compared with the quality of service given by the other more exact technical professions? The successful architect who feels that the service he is giving cannot be improved upon (but which does not always survive a comparison with those other services) and that one who perchance does vaguely feel that the service he is giving is lacking in the exactness or accuracy or fullness of some of its parts, but nevertheless decides that the rendering of the more efficient, accurate and complete service would be but an added expense to him and would cut into his profits, is doing more harm to the public appreciation of the profession than is the humble practitioner who may not be so fully qualified in all the fundamental essentials of an architect. Every man believes somehow that his own individual business is different from all others, and even from those in his own line. It is so only in details; the principles of organization applicable to large business organizations apply equally to the smallest. Therefore, again, an architect should organize his practice and his office procedure and, while in many instances such an organization exists only in his own mind and may never be placed upon paper, if he does study out and apply the principles of organization and systematize his practice and procedure and will strictly manage his work in accordance with these principles and his system, he will find that organization and management will turn many a losing job into an earning one for him.

The Individual Problem

What is the architect's organization? It involves two very distinct functions or branches:

First: Organization of his own business so that his living may be assured, and

Second: Organization of his client's building operations so that planning and designing without extravagance, economy and diligence of construction will be assured him.

The measure of the success attained in each of these two distinct branches of the architect's practice depends entirely upon the architect's ability to manage them as an executive. Outstanding, it must be evident that if the architect cannot successfully maintain the first of these functions he cannot be worthy or capable of managing the second.

These two functions of the architect's practice have clear distinct divisions of work and responsibility, each of which may be assumed to be departments. These departments are:

First: The securing of the job—wherein the architect sells his artistic, technical and business ability.

Second: The planning of the job—wherein the architect first conceives the design and then sells it. Once this is sold, the architect has nothing else to sell; his functions as seller cease, his functions as buyer begin.

Third: The labor of the job—the making of the working drawings, and the specifications and the coordinating into them of the various arts and sciences whereby the architect becomes the purchasing agent of the owner and a buyer of many products and of a vast amount of labor.

Fourth: The contracts of the job—the awarding of contracts and the preparation and recording of the documents thereof, whereby the architect himself complies with and in turn requires compliance with all laws and regulations pertaining to buildings and their construction and to the occupancy and maintenance of property from all others concerned in the building operations.

Fifth: The supervision of the job—the constant watching of the construction processes, materials and workmanship until the completion of the construction; whereby the architect insures for the owner that all those materials and all that labor and workmanship which have been purchased by him through the agency of the architect are being rendered satisfactorily to him.

Sixth: The administration of a job—the keeping of records and books, issuing of orders, notices and certificates, the general correspondence of the office, whereby the architect maintains an exact accounting both of his own and his clients' obligations, each day accurately completing the records so as to leave nothing to chance and future negotiations.

Each of those six chief departments of the architect's business organization has many distinct branches of work, in each of which the accuracy and soundness of the architect's judgment and the exactness of his management, exercise dominating influences upon his earnings and the capacity of his organization to render service. Let us examine some of these further functions or subdivisions of the work of the various departments.

Securing the Job

First: The securing of the job. The usefulness of the architect to society becomes greater as his imagination and accurate vision originates the job; he performs no more commendable economic function than that of suggesting the development of a property that will be profitable to an owner and creditable to the community. This function will suggest distinct subdivisions of work in this first department, many of which in the larger organizations have active managerial heads.

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(a) An exact knowledge of real estate and its value, of rents and operative and maintenance costs of buildings, of the amounts chargeable to their depreciation and obsolescence, of the needs of the community for various kinds of building, of conditions in other communities which might give suggestions, and, finally, a vision of the future community and imagination to plan its development.

(b) An exact knowledge of the financing of building projects and the qualification to bring properties and finance together and to work out with the owner and financial interests the financial scheme that will properly develop the property to economic use.

(c) An exact knowledge of the costs of materials and labor and workmanship and the ability to appraise quantities, so that an accurate estimate of the costs of the proposed work can be given; an estimate so accurate that it would correctly guide the entire building operation and would protect the total expenditures of the owner just as surely as if the architect assumed that function of guaranteeing the costs of construction which belongs to the contractor.

(d) A development of a selling system so that there may be placed properly before the public an accurate account of the ability of the architect and the quality of service given by him.

Planning the Job

Second: The planning of the job. The organization of the architect must immediately make available to him all laws and ordinances bearing upon the problem in hand, and the solutions of similar problems by other architects; the architect should by various and continuous studies and consultations arrive at a development of the property that would give beauty to the building; that would give light and air to its occupancy and insure to each of the human beings using the building an abundance of these two essentials to right living and right working; that would insure stability and economy of construction and operation and maintenance and a maximum earning capacity. All essentials of the problem and design should be fixed and agreed upon at this stage of production, in order that the working drawings shall be a steady development of the preliminary sketches.

The Labor of the Job

Third: The labor of the job. This department of the architect's organization is generally the most intangible and poorly organized part of his business. This in spite of the fact that it is responsible for a very large proportion of the ultimate cost of the architect's practice. In preparing the working drawings and specifications, two distinctive functions of production, each should be thoroughly systematized and constantly checked back one against the other for errors or commission and omission.

The production of drawings involves these clearly distinct functions:

(a) Sanitary work, with many subdivisions of work and responsibility such as the correct and accurate designing of the water, plumbing, waste, drainage, gas and other systems.

(b) Structural work also with many subdivisions such as the designing of structural steel, reinforced concrete, masonry and wood framing.

(c) Mechanical work, again with numerous subdivisions, including the designing of systems of power, air, vacuum, heating, ventilating, refrigerating, elevator, acoustics, etc.

(d) Electrical work, with its subdivisions of light, power, telephones and other minor electrical systems; (e) Landscape work; (f) Interior decorative work; (g) Sculpture; (h) Painting; (i) Fixture work; (j) Furniture work; (k) Modeling work, and finally

Architectural work, whereby is brought together all of these various coordinating divisions of productive work into a completed set of working drawings.

The production of specifications requires that knowledge of methods, the market, materials, and labor of which so much has been said in this paper, as well as an intimate knowledge of working drawings. This knowledge must be evidenced by a clear, accurate statement of the constructive methods to be followed and those things which explain the intent of the drawings and the construction work, but which cannot be properly shown upon the drawings. Protecting, adjusting and coordinating these two elements of production should be the checking work, upon the accuracy of which rests the final responsibility of accuracy in all parts of the drawings and specifications. Too frequently this checking is never done until the contractor finds the error, omission, or discrepancies during construction.

Each of these subdivisions of this third department of production, in the architect's organization, should function under responsible heads who are directly responsible for the accuracy, cost, and time of completion of these drawings and specifications. These heads should report in writing at short regular intervals to that assistant of the architect to whom is delegated the responsibility for the production work, that he may check and analyze the progress made. If the work in the architect's office does not justify the retaining in his organization of the experts necessary to design competently and be responsible for each of these various portions of his work, he must obtain such designing ability from well-qualified independent experts whose reliability and integrity are beyond question and whose financial interests cannot lie in any of those products or processes which are integral with their designs or which may be specified by them. The responsibility for production, of course, rests finally upon the architect himself and the amount of money that he will earn from his commission and the accuracy and the excellency of the service which he will render depend to a large degree upon how carefully he has organized this portion of his work, how definitely he has defined the responsibilities of those who are administering it for him, how promptly he gives orders and instructions to them, how accurately and diligently he makes his decisions upon matters of policy and detail during the production period, and how accurate and recent is his knowledge of constructive methods, materials and labor and the condition of the markets. As an efficient manager, he will keep accurate costs of production, as well as of all other departments; will at short regular intervals analyze them; will carefully budget the expense to be incurred and

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schedule the time to be allowed for the production of drawings and specifications and will insist that every department shall function within its budget and the time allotted. The general adoption of a budget and time system will eventually work into that much-to-be-desired system whereby all members of the organization can be given the incentive to cooperate in giving service that a direct compensation based on the quality and quantity of service given will bring.

The Contracts of the Job

Fourth: Contracts of the job. This department must constantly consult counsel that it shall have accurate knowledge of all legal requirements appertaining to the contracts of building so as to set forth clearly in the contract documents the responsibilities and duties of the parties thereto; so as to give a clear statement of payments and of conditions that govern the work; so as to insure adequate protection of private and public properties and interests and those of each party to the contract; so as to give properly and when required all notices required by law and contract; so as to obtain all inspections and certificates required by law or contract; so as to insure the accuracy of all descriptions and titles; so as to attend to all bonds, insurance and guarantees; so as to secure surveys and accurate information regarding all conditions at the site and restrictions thereon imposed by laws, ordinances or other legal documents.

The Supervision of the Job

Fifth: The supervision of the job. The supervision should be distinctly differentiated from superintendence; the one denoting occasional, the other continuous, inspection. A most common request of the architect is that he eliminate the furnishing of supervision and superintendence from his service; so common has this request become that supervision is the hardest part of the architect's service to sell, in spite of its great importance to the owner. This is primarily because this portion of the architect's service has been so poorly rendered that he has not impressed upon the public the importance or necessity of it. Correct inspection should be as carefully subdivided in its function as is production and an architect should no more expect an inspector to know all trades and materials than he would expect a draughtsman to know all of the engineering sciences. Every trade during construction should be supervised by one who is expert in that particular trade; the concrete, the masonry, the steel, the plumbing, the mechanical equipment, the electrical equipment, the mill work, the painting, the elevators, each of them should be just as carefully supervised by experts during erection as they were considered by experts during design. Only by such close, careful and expert supervision of the trades can the architect insure to the owner that the value of money which the architect has obligated the owner to spend for these things is being returned to him in substantial performance. The organization of this department and its proper management is a crying need in most architects' offices. Segregation of contracts entails additional organization in this department and requires very efficient executive ability in the managing.

The Administration of the Job

Sixth: The administration of the job. This department is one of many functions. Bookkeeping, record and cost keeping, the keeping of progress, test and other reports, stenography, typewriting, books, photographs, clippings, magazines, samples, blue printing, catalogues, correspondence, the correct accurate filing of each are but a few of the multitudinous subdivisions of this department. Clerks of the work belong to this department. File clerks are more important to the efficient management of this department than is commonly understood. Books should be specially devised for architectural accounting and regularly audited. The telephone operator and counter clerk should be made important positions; the office contacts with the public at these two points. On this department rests the burden of accurate accounting and recording of all phases of the building operations and the rendering of these reports regularly and on time to those who analyze the reports; on it rests the coordination of all reports and records and the follow-up of all activities; on it rests the duty of cost-keeping, and no division of the architect's business is probably as little understood as is the making of accurate costs of the different subdivisions of his practice and of the building operations. It is impossible within the limits of this paper to go into the ramifications of this very important administrative department to consider the many printed forms and documents that become an integral part of its functioning, interesting as this discussion would be. Nor is there opportunity to consider the analysis of these reports and records and the conclusions to be derived from them; these important functions of office management are too involved to be considered in this general review of architectural organization.

Conclusion

This is only a most general view of the departments and activities involved in general architectural practice made to suggest the needs of organization and to indicate the functions that must be considered in any system of organization that might be evolved; architects who specialize in any subject will have many other departmental suggestions. Many of the departments justify complete studies of procedure such as cannot be attempted in this paper, the purposes of which will be accomplished if the indications of organization which I have sketched will suggest to architects that they go further into the subject; that they examine their management; that they analyze the service they are giving to ascertain if it can be improved; that they think whether or not they have their own efforts organized to produce without waste; that they examine whether they are giving decisions promptly, and, above all, that they examine themselves with all honesty as to whether they are giving service of such quality as will fulfil the primary obligation they assumed when they accepted the work from the owner. If they are not, let them do so now, regardless of its present cost to them. Not to do so spells failure.

Let me recapitulate what has been discussed.

It has been shown:

That architecture must be conducted as a business, and therefore it must be organized to do business;

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That the success of business depends upon the service rendered;

That service rendered depends upon the organization of business;

That the welfare of the organization depends upon its management;

That successful management means the administering of each department of the organization with exact knowledge combined with ideals of service, integrity, common sense and diligence;

That successful management places responsibility upon competent individuals, holds them responsible for results, and adequately compensates them therefor, at the same time coordinating the work of these individuals;

That successful management requires clearly stated instructions and documents, each always committed to writing, with their delivery and receipt clearly accounted for and acknowledged, leaving nothing to remembrance and chance;

That it requires promptness of decision with nothing put off from day to day;

That it requires accuracy in every function;

That successful management assumes full responsibilities for its actions without equivocation or evasion, and demands equal consideration from those with whom it deals;

That successful management knows the detailed costs of every service given by it and of those things with and in which it deals, and by constant and repeated regular analysis of these costs and the services rendered produces these services at the minimum costs;

That management is an art, always a matter of personality; organization is merely the machinery which the personality uses to accomplish the art.

Regardless of the size of his plant, let every architect take these thoughts with him. If he will put down on paper a plan of doing his work, his idea of the organization of his forces, working from the broad functions down to the finest detail, systematizing every effort of his practice, and will compare and discuss this plan with his fellows who have made similar surveys of their practice; if he will fearlessly analyze the quality and quantity of service he is giving and compare them with the most complete service he can imagine the architectural profession should give; if he will analyze his costs of giving these services; if he will budget his income and schedule his own and the time to be spent upon the various portions of the work; if he will reduce every order and instruction to writing and confirm every verbal understanding in the same manner; if he will not start any job until he has made a clear contract with his client definitely stating his own duties, the owner's duties, the compensation to be paid to him with the methods and times of payment of same, clearly providing for all contingencies of termination of contract or work and covering all relations to other interests on the work; and, finally, if he will conclude to conduct his business strictly within these lines he will have established in his business the essentials of good managership and will have done the great step to put himself in the path that will raise the practice of architecture in the public esteem. True success will follow.

EDWIN BERGSTROM.

The Secretary's Page

New Year, 1924! The time for all sorts of new and good resolutions! I have made some myself and I am about to suggest a good resolution for each member of the Institute. A New Year is always a good time to start anything good. I have had a memorandum from our tireless Executive Secretary and I am going to take the substance of his memorandum and tell you about it and then offer the suggested resolution. And so I begin with the next number on the list of Institute subjects, and I know it will contain news to most of my readers.

16. OBJECTS OF THE INSTITUTE. The objects of the Institute are: *"To organize and unite in fellowship the Architects of the United States of America, to combine their efforts so as to promote the æsthetic, scientific, and practical efficiency of the profession, and to make the profession of ever-increasing service to society."*

Do you realize that the Institute has been an active corporation, under a charter issued by the State of New York, since 1857? For sixty-seven years, then, the Institute has been trying to accomplish these objects and the strides it has made in this direction are most noteworthy. It will never achieve full accomplishment, but it can and will achieve a larger proportion of accomplishment each year if its policies are right and if it executes its trust to the profession and to society.

17. THE INSTITUTE'S POLICY ON MEMBERSHIP GROWTH. There are usually several plans of reaching the same objective. In the past, within the Institute, there have been many who believed that progress will be greater if the Institute were an academy with a membership limited to those of great accomplishment in the field of architectural design and the allied arts. They felt that the Institute should be a beacon light on a high hill furnishing inspiration at a distance, but not too much light and not a great amount of warmth. Another group believed in something entirely different.

Since the war there has been a change. Those charged with the leadership of this professional society, without for a moment casting a reflection upon the policy of the past, have agreed that under present-day conditions the Institute ought to be a vital personal thing to the average member and to the architect who is not a member—giving them leadership and comradeship. So, after investigations covering conditions of practice in all parts of the country, registration and license law requirements, the number of architects in practice, the number of architectural graduates each year and their equipment, and the field of draftsmen and junior architects, it was decided that the Institute should adopt a broader policy on the membership question. That policy may be summed up by saying that the Officers and Directors are of the opinion that by the end of the year 1926 the Institute

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should have 4,000 active members. It has, at the end of 1923, 2,700 active members.

18. RESULTS OF THIS GROWTH. This decision to fill the ranks was really made in 1920, at which time there were 1,410 members. Let us glance for a moment at some authentic figures for the year 1920, remembering that the growth of the Institute in the past three years has not been a mushroom expansion. It has been a process of taking in men who should have been in years ago and the process has not been completed.

The U. S. Census Bureau reports that in 1920 there were 18,185 architects in the United States. Using the records at the Octagon House as a basis we knock off 8,185 of these men on the theory that they are builders or carpenters or whatnots. And we agreed that in 1920 there were approximately 10,000 men in the United States and its possessions who were rendering all the way from first-class to whatever could pass as architectural service. Of these 10,000 men, 1,410 belonged to the A. I. A. A comparison with other professions shows that at that time in the proportion of members of national organizations to the total number of men in the United States claimed as being members of a profession only 8.44 per cent of the architects were members of the American Institute of Architects, and this was far less than that of any other professional body. This might lead an outsider to remark that in 1920 the Institute was not doing very much "To organize and unite in fellowship the Architects of the United States of America."

For, be it remembered, it is not possible to know all the outsiders and so to explain to them that there are problems in this matter of organizing the architects in a country where, up to a recent time, comparatively anyone might call himself an architect merely by announcing the event! The Institute has standards of admission in which it believes there lie safeguards to the owners and occupants of buildings, and when it is remembered that the administrators of the registration laws have had revealed to them the startling structural incompetence of so many hundreds of men who elected to call themselves architects just because there was nothing to prevent them from doing so, it is not to be wondered at that the Institute has grown slowly. It must so grow, which is why we all recognize that 4,000 members at the end of 1926 is a fair estimate of the percentage of the profession that can be admitted under the existing standards.

Now, while it may be true that Governmental Departments or State or Municipal authorities exclaim to us when we appear before them to represent the Institute that the Institute does not represent a majority of the profession, that does not mean that we should be stampeded into a wild rush to fill our ranks for the mere purpose of attaining numerical strength. It means that we must grow as fast as it is consistently possible to do, in view of all the conditions, while on the other hand we encourage every outside agency which is tending so to raise the technical and cultural equipment of the architects of the future, that in the end we shall have an Institute wholly representative of a wholly competent profession. That is the ultimate goal of our steps—steps which cannot be taken without the help of the present membership, which is why the Five Year Program is printed on page 16 of the Manual, a copy of which is now in the hands of every Institute member. Three years of the program have been accomplished, and we are a bit ahead of the schedule in membership and in financial resources. Consequently we are that much ahead in capacity "to promote the æsthetic, scientific and practical efficiency of the profession, and to make the profession of ever-increasing service to society."

But there remains to be secured during the years 1924, 1925 and 1926, 1,300 members, an average of say 435 each year. This seems a difficult task; *and it is,* unless it is accomplished on a small unit basis and with the active, whole-hearted support of every Chapter. There are now 53 Chapters with an approximate total membership of 2,700. If each Chapter added to its membership each year for three years one new member for every six old members, the deed would be done by the end of 1926. Of course, it is realized that this would not be feasible in some Chapters that have already placed themselves on a representative basis and whose increase from now on can only be the normal increase of the profession. On the other hand, some Chapters which have increased as little as 3 per cent in the last three years might do considerably better than one new member for each six old members.

In conclusion, may these points be clear: The Institute Board does not advocate membership for a *majority* of the 10,000 practicing architects. It does believe that by the end of 1924 the Institute should have 3,000 members, by the end of 1925, 3,500 members, and by the end of 1926, 4,000 members.

The Board is equally clear that this increase must be brought about by the Chapters, and that the Institute, as a national society, can do no more than point the way and furnish the ammunition. The work itself must be done by the individual Chapters and individual members. Each Chapter should bear in mind that it undoubtedly has within its territory some good men who would be delighted if they were asked to apply for Chapter and Institute membership, and that some of these men, perhaps through a sense of pride, will never take the initiative in such a matter.

Of this one thing your Officers and Directors are certain—the expansion of the last three years has not injured the Institute within or without. It has been of the greatest benefit. And if continued progress is to be sustained in making the architect just as influential in national and community life, just as much of a necessity as is the doctor or the lawyer, then the national society of the architects must be stronger numerically.

Every Chapter has a Committee on Institute Membership. The Chairmen and Acting Chairmen are listed below. The Chairman in your Chapter, or the Secretary's office at the Octagon House, would be only too glad to receive from you the name of some unaffiliated architect whom you believe to be worthy of consideration for Institute membership. The Chapter Committeemen are:

ALABAMA, Eugene H. Knight; ARKANSAS, Lawson Delony; BALTIMORE, Henry S. T. White; BOSTON, Edwin S. Dodge; BROOKLYN, Edwin S. Coy; BUFFALO, Edward B. Green, Jr.; CENTRAL ILLINOIS, F. N. Emer-

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son, CENTRAL NEW YORK, Alfred T. Taylor; CHICAGO, J. C. Bollenbacher; CINCINNATI, Walter L. Rapp; CLEVELAND, H. L. Shupe; COLORADO, Robert K. Fuller; COLUMBUS, Orlando C. Miller; CONNECTICUT, Edward B. Caldwell, Jr.; DAYTON, Harry Schenck; ERIE, Armin Schotte; FLORIDA, Mellen C. Creeley; GEORGIA, F. D. Burge; INDIANA, Fermor S. Cannon; IOWA, W. J. Brown; KANSAS CITY, Arthur D. James; KANSAS, W. E. Glover; KENTUCKY, Hermann Wischmeyer; LOUISIANA, Solis Seiferth; MICHIGAN, J. H. G. Steffens; MINNESOTA, William W. Tyrie; MONTANA, C. S. Haire; NEBRASKA, Edwin B. Clarke; NEW JERSEY, Ernest H. Fougner; NEW YORK, J. Edgar Willing; NORTH CAROLINA, Willard G. Northrup; OREGON, Charles D. James; PHILADELPHIA, John S. Schwacke; PITTSBURGH, Richard Hooker; RHODE ISLAND, John Hutchins Cady; SAN FRANCISCO, J. S. Fairweather; SCRANTON-WILKES-BARRE, W. S. Lowndes; SOUTH CAROLINA, J. F. Collins; SOUTH GEORGIA, Arthur F. Comer; SOUTHERN CALIFORNIA, Charles S. Plummer; SOUTHERN PENNSYLVANIA, Miller I. Kast; ST. LOUIS, J. C. Stephens; ST. PAUL, Edwin H. Lundie; TENNESSEE, C. K. Colley; TEXAS, H. A. Overbeck; TOLEDO, Charles A. Langdon; UTAH, Georgius Y. Cannon; VIRGINIA, Philip N. Stern; WASHINGTON, D. C., Albert L. Harris; WASHINGTON STATE, A. F. Menke; WEST VIRGINIA, L. G. Tucker, and WISCONSIN, Henry J. Rotier.

Now, in conclusion, may I suggest the New Year's resolution that I spoke of at the beginning of the Page:

"I hereby resolve to think over all the names of architects I know who are not members of the Institute, and if in my opinion they should be members to do all I can to persuade them to become members of the American Institute of Architects."

Fellowships

"Art. II, Sec. 1. *General Conditions of Fellowship.*

Fellowship in the American Institute of Architects is conferred upon a member who is a citizen of the United States who, in the opinion of an authorized Jury of Fellows, shall have notably contributed to the advancement of the Profession in design, construction, literature, education or public service.

The above Jury shall be composed of six Fellows appointed by the President, who shall make six appointments for the first year with varying terms, and two appointments each succeeding year.

The name of each candidate selected by the Jury, after having been submitted to the members of the Chapter of which he is a member, and to all Members and Fellows of the Institute, shall be submitted to the Convention following the nomination, for election, as provided in Section 2 of this Article.

The Jury shall formulate rules for its procedure subject to the approval of the Board.

Section 2. *Mode of Election.*

Fellows shall be elected at the Annual Convention by Australian ballot from a printed list submitted by the above jury. The polls shall be open for receiving ballots under such rules as the Board of Directors may prescribe. The names of all candidates for election who do not receive five or more negative votes shall be read to the Convention and declared to be duly elected as Fellows of the American Institute of Architects.

Rejected candidates are not eligible for election at the next Annual Convention.

Section 3. *Nomenclature.*

Fellowship in the Institute shall be designated by the initials 'F.A.I.A.'

The Jury of Fellows for the current year wishes to call the above text to the attention of the Institute and to request the cooperation of Institute members in carrying out the duties of the Jury. Fellowship is an honorary distinction, conferred upon a selected group and will not be offered except upon the mature judgment of the Jury, based upon the best information which can be obtained. It is hardly possible that absolutely equal standards should be attained by every nominee, or that with the limitations of human knowledge, every man worthy of Fellowship should be sufficiently well known to the Jury to secure recognition.

The Jury will, so far as lies within its power, pass impartially upon all suggestions it receives and will nominate from time to time candidates for the approval of the Institute. It solicits suggestions and asks that they be sent to the Octagon, marked "For the attention of the Jury," and it will appreciate full and free expressions of opinion from the membership of the Institute in any of the methods noted above. HENRY H. KENDALL.

Chairman, Jury of Fellows.

Industrial Relations

Probably not more than 10 per cent of the members of the Institute are aware of the fact that the very promising movement for apprenticeship training in the building industry which seems to be starting up all over the country is really the result of an impulse given by the Institute. Four years ago the movement was started at a conference in Atlantic City at which representatives of the Institute's "Post War Committee" and delegates from the Contractors' Associations and Federation of Labor met to consider ways and means whereby some start could be made in this and other directions.

In last month's JOURNAL we reported the result of a conference held in Washington under the Bureau of Vocational Training at which the essential parts of the programme adopted were points made by members of the Institute. We refer particularly to the clause which states that at the very outset of any plan for apprenticeship training in the building industry the plan must have the backing of a group not only representative of the employers and employees, but also of the architects and engineers, the local educational systems and the other elements interested in the building industry.

At a preliminary meeting of the National Association for Vocational Education, held in New York on 3 December, the Chairman of the Institute's Committee on Industrial Relations presented to the members of this Association the outline of the plan under which the vari-

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ous Congress Groups were organized in the different cities and the essential points in the scheme of apprenticeship training already under way in Boston, New York and elsewhere. Those present at the meeting were mainly educators, and it was exceedingly gratifying to find that the scheme received their enthusiastic support. It appears that at meetings of the Association held in Buffalo later in the week the whole subject was gone over in detail, the actual system being explained by Mr. Moran of the New York Apprenticeship Commission. According to the newspaper reports, the members of the Association seem to have been much impressed by the progress made and to have recognized the fundamental principle of this cooperative effort in which the architects have taken so leading a part.

According to the latest reports, a Congress Group, the formation of which is now under way in St. Louis, was formally organized at a meeting held there on Tuesday, 11 December. Mr. George F. A. Brueggeman, a member of the Institute, accepted the permanent Presidency of the Congress. We hope that next month's JOURNAL will be able to report this meeting in full.

ROBERT D. KOHN,
Chairman Committee on Industrial Relations.

Public Buildings

According to report it is now believed that no Omnibus Public Buildings Bill will be presented at the present Congress. It is announced that the program of the administration for a budgeted annual expenditure of five millions in the city of Washington will likely be acceptable to Congress and that in lieu of a definite program for the Federal public building necessities of the country as a whole, the most pressing of these will be taken care of by an arrangement in which the views of the various Department Secretaries will prevail. The outcome may be regarded as a slight step forward. But it still leaves the question in a far from settled condition. Murmurs are already being heard from cities where postal facilities are and have long been deplorable and it is a rather pathetic commentary upon our party system of politics when campaign issues are allowed to obscure genuine necessities. There is clamor for reduction of taxation, but true reductions will be found in a public building program based upon a suppression of operating costs and an improvement in service, rather than upon that visible and often illusory reduction in the amount collected directly by the Treasury Department. Taxation is not always what it seems in these matters, and the country is already heavily taxed by an archaic public building policy.

MILTON B. MEDARY, JR.,
Chairman, Committee on Public Buildings.

The Octagon House

The Building Committee has invested the generous gift of the Los Angeles architects and the furniture for the drawing room has arrived at the Octagon. The room is being renovated and the furniture and hangings will shortly be placed to give the room the aspect which it might have had in the year 1800.

D. E. WAID,
Chairman, Committee on Building.

Public Information

The Committee on Fire Prevention of the New York Chapter has made a very careful study of Fire Prevention in New York State. As a result of this six short letters written in words of one syllable were issued and distributed throughout the smaller towns surrounding New York City. The letters were in serial form so that each might be digested separately. The Chairman of the Committee, Mr. William O. Ludlow, has suggested that other Chapters might find the procedure useful and has furnished copies of the letters for publication. A letter addressed to him at 101 Park Avenue, New York City, will receive immediate response should any further information be desired.

In his communication covering the letters Mr. Ludlow says:

"I might add that I have been considerably interested in this matter of fire prevention, first because I believe that every architect should take more interest in it than he does. I believe that a good deal of the huge loss every year is directly attributive to the fact that architects as a class have not sufficient interest in the subject, or allow themselves to be dominated by the man who holds the pocketbook.

"In the second place I believe that the architects will stand much better in the estimation of the public if in a public way they show that they are concerned not only in æsthetics and commissions but in public welfare as well."

ABOUT ten Chapters are publishing the articles issued by the Public Information Committee and the Committee wishes to extend its hearty thanks to the Chairmen of the local Chapters for what they have done in furthering this activity. Some of the important newspapers are paying for the articles. In other cases the Chapters are paying the cost and in one or two cases where it seemed impossible for the Chapters to raise the funds the Institute is contributing the articles. In a few localities the local Chapter Committees have made serious efforts to induce the newspapers to publish the articles but have been unsuccessful because the newspapers consider the matter advertising and so definitely do they believe that newspapers are purely money-making enterprises and have no responsibility toward educating the public that they will not publish any matter that might indirectly profit an organization like the Institute or a profession like architecture without being paid for it. From a regrettably large portion of Chapters the Public Information Committee received no answers to its communications about these articles. It is hardly fair to appoint a Committee and ask it to do certain work without furnishing the necessary cooperation toward the execution of that work.

AN ORGANIZATION to put through a City Hall is being worked out by the Columbus Chapter which wishes to

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enlarge this project by the development of a Civic Center, of which the City Hall would be the main point. A Central High School, New Post Office, a new Union Station, the New Masonic Temple and several other public and semi-public buildings with a considerable amount of park area are included in the scheme. A City Plan Commission has been constituted, a zoning ordinance has been enacted and a boulevard system project begun. A syndicate of architects is being formed through the Chapter, whereby the interest and ability of all the architects of the city may be obtained. We hope later on to be able to publish some information about the syndicate with the details of its formation and to say how it is working.

THE Indiana Chapter has been co-operating with contractors, building material men and labor representatives in arranging district meetings of men interested in the building industry. Meetings are held and topics of interest to all of the element represented discussed. A State Building Law is in process of codification and in this the Chapter is taking an active interest.

IN THE field of Public Information, the Washington, D. C., Chapter has been very active. First they have induced the Art Editor of the Washington *Post* to visit Chapter members and publish each week on the Art Page of the Sunday *Post* a brief interview with one of the members visited. The same editor also edits the Washington *Herald* and in that capacity has asked permission to run a full page on the local Chapter, its members and its work. The Washington *Post* has just inaugurated a special section which appears every Monday morning and is entitled "The Home Beautiful." After having had the matter brought to his attention, the editor has invited Mr. Harry F. Cunningham, Chairman of the Chapter's Public Information Committee, to contribute a weekly column on the architect's part in "The Home Beautiful." A Speaker's Bureau also has been inaugurated by the Chapter and as many organizations that have asked for speakers in the past have resumed their regular meetings; it is expected that this Bureau will begin to function shortly.

JOHN V. VAN PELT, *Chairman,*
126 *East 59th Street,*
New York City.

New Members Elected

As of 17 November, 1923

Harry M. Price, Stanley Matthews, *Cincinnati,* CINCINNATI; Montana S. Fallis, *Denver,* COLORADO; Peter M. Hulsken, *Lima, O.,* DAYTON; Clarence Wentworth Irwin, *Waterloo*; Carrol A. Klein, *Davenport,* IOWA; Claude H. Lindsley, *Jackson, Miss.,* LOUISIANA; Henry H. Turner, *Grand Rapids,* MICHIGAN; Albert H. Dyer, *Fremont,* NEBRASKA; Hall Crews, *Winston-Salem,* NORTH CAROLINA; James J. Baldwin, Joseph Huntley Casey, Charles William Fant, *Anderson,* SOUTH CAROLINA; William J. Hanker, William G. Lester, Edwin Brewster Phillips, Raymond Briggs Spencer, *Memphis,* TENNESSEE; John W. Kearney, WASHINGTON, D. C.; Ernest T. Mock, *Tacoma*; Earl W. Morrison, Vas S. Stimson, *Spokane,* WASHINGTON STATE.

Announcements

THE Fifty-Seventh Annual Convention will be held in Washington, 21, 22, 23 May, 1924.

MR. HERBERT B. BRIGGS of Cleveland has been appointed State Architect for Ohio.

AN INDEX for Volume XI of the JOURNAL has been printed and will be mailed to all subscribers of record on request.

The Ohio Board of Building Standards

The Ohio Board of Building Standards, created by House Bill No. 539, enacted 6 April, 1923, and found in Ohio Laws 110, was organized 23 October, 1923. It has a membership of seven, two of whom are state officials and five are by appointment of Governor A. V. Donahey. The members and officers are: Herbert B. Briggs, architect, Cleveland, chairman; Thomas P. Kearns, Chief of the Division of Workshops, Factories and Public Buildings of the State Department of Industrial Relations, secretary; William H. Dittoe, Chief Sanitary Engineer of the State Department of Health; Peter E. Dempsey, attorney-at-law, Columbus; John H. Clemmer, general contractor, Akron; Edward J. Cavan, electrical engineer, Cleveland; William C. Groeniger, sanitary engineer, Columbus.

House Bill No. 539, prepared by and enacted through the efforts of the Ohio State Association of Architects, broadly speaking provides: For the revision of the Ohio State Building Code and other State laws regulating buildings and the sanitation and equipment thereof; for making uniform existing lawful requirements imposed by various departments under the police power of the State; for the writing of legislation to regulate the construction of buildings not regulated by the state code or by lawful requirements; for the supervisory centralization of building regulation in one State activity; for the making of building regulation *reasonable* in its imposed requirements; and, particularly, for the lawful machinery through which *building regulation may be kept abreast of building progress and practice* without recourse to slow and uncertain legislative action.

The Ohio State Building Code, in effect since 1912, was enacted following—and largely as a result of—the Iroquois theater and the Collinwood school fires. It contains many of the nation-wide drastic provisions that were written into codes following those fires. It regulates the construction of theaters, assembly halls and school buildings only, the sanitation of all buildings except dwelling houses, sets up partial standards for the construction and equipment for certain kinds of buildings and provides for administration, except for the sanitation part, by the Division of Workshops, Factories and Public Buildings in the Department of Industrial Relations. The sanitation part—State Plumbing Code—is administered through

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the Department of Health. Fire prevention and fire regulation, including electrical inspection, are vested in the Division of Fire Marshal, in the Department of Commerce. Ohio has no electrical code.

The Ohio code has not been changed or amended in any essential particular since it became a law, twelve years ago. Efforts to amend it and to enact a complete up-to-date code have met the usual fate of technical legislation submitted to non-technical deliberative bodies. The Ohio Supreme Court recently held that the division administering the code has no power to determine equivalents for nor to modify or change any of its requirements, regardless of how archaic they may be, a power supposedly conferred by the law under certain protective provisions. The somewhat uncoordinated administrative provisions have tended toward confusion and inconvenience on the part of those engaged in the construction of buildings.

The Board of Building Standards law is not a detailed building code. It defines the principles of and is a basic building code. It provides for the prompt determination of present and future code requirements by the Board itself. Its defined purpose is that all public buildings used or that may be used for resort, assembly, education, entertainment, lodging, trade, manufacture or repair, storage, traffic or occupancy by the public, and all other buildings, except single and two-family dwellings, within the corporate limits of a municipality or on allotted territory within three miles thereof *"shall be so constructed, erected, equipped and maintained that they shall be safe and sanitary, for their intended use and occupancy."* It defines a building to be "any structure consisting of foundations, walls, columns, girders, beams, floors and roof, or a combination of any number of these parts, with or without other parts or appurtenances." It defines the words "safe" and "sanitary" and makes sanitary cover and include "lighting, heating, ventilating or plumbing."

The Board is established in the Department of Industrial Relations. It is mandatorially authorized and instructed to "formulate and report to the General Assembly" amendments to existing building construction and equipment laws and additional legislation "to carry out fully" the purposes of the act creating it; including the coordination of all regulatory functions of the State; and, on petition of any party at interest, *to determine and establish equivalents for required, or to be required, fixtures, devices, materials, systems or manners of construction or installation,* or to refuse to grant such petition. It is *directed* to recommend and promote state-wide uniformity in building law and ordinance regulation requirements.

The constitutional and statutory powers of other State functions and of municipalities are not limited by the law, but such functions and municipalities shall not enact legislation in conflict with it.

The law provides that contracts for buildings shall not be entered into unless the drawings and specifications therefor shall have been approved by an authorized municipal commissioner of buildings or by the Chief of the State Division administering the code. Any building constructed, equipped, altered or repaired not in accordance with the laws of Ohio and with the determinations of the Board, shall be deemed a nuisance.

The new Board, on organization, declared its purpose to be "to establish standards to make buildings safe and sanitary with due regard to construction cost economies; to base its determinations of equivalents solely in the interest of the public; and to provide a system through which interested activities, organizations and individuals may be kept informed of its work, actions and determinations."

HERBERT B. BRIGGS.

Errata

Due to an unobserved typographical error the location of the old antique shop in Mr. Chamberlain's drawing of Paris was printed as Boulevard Raspart, whereas it should have been Boulevard Raspail.

Restoration of the Fine Arts Building, Chicago

Readers of the JOURNAL have been able to follow the untiring effort of Mr. George W. Maher and his Special Committee of the Chicago Chapter toward securing the restoration of the Fine Arts Building in Jackson Park. Fortunately they have been loyally supported by the leading organizations of their city and by the public press, and we are glad to be able to record that the South Park Commissioners have appropriated $500,000 for the work and ordered that preparations be made for plans and the taking of bids. The money available is not sufficient to complete the whole work but there seems no reason to doubt the ultimate complete restoration of the building.

Architecture, Vellum and Parchment

The Bodleian

As I sit, I look, surely, on the most learned looking lot of worthy readers in Christendom. I can see one whose ivory face in its black skull-cap might well have been the original of that Ghirlandajo portrait we all know; another, who sits habitually in the same stall with fifteen huge tomes before him, dozing, with a large white bath-towel draped over his head; another still, who, as I live, wears three pairs of spectacles at once—surely the greatest living number ever assembled at one and the same time upon any single nose!

The Oxford undergrad is conspicuous here by his absence, the Radcliffe just opposite holding all, or nearly all he may require, but the "unco' learned" abound and there is that in the very fragrance of the room, a subtle blend of vellum and old wood, of ink and leather, that intrigues the near-wise to come and join the ranks of the elect.

Suppose then, we mount the worn old wooden stairs,

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OXFORD—DIVINITY SCHOOL, 1480

armed with our reader's permits, and push open the simple green baize door. We are in the Arts End, a narrow 1613 addition to the original library, built over the Divinity school in 1420. Down the centre run glass-topped cases displaying some of the treasures of the collection; illuminated Acts of the Apostles and Hour Books belonging to Kings, Queens and Saints of old; richly jeweled and bound missals and fragments of ancient papyrus and vellum, almost undecipherable with the weight of their years. One, a beautiful old volume of the Acts, once the property of the Venerable Bede himself, who died in 735! Another, a Latin copy of the Gospels, being one of two given by Pope Gregory to Saint Augustine and proven to have been the very book in which the Gospels first entered England. Then there is the mammoth Vernon MS., almost too heavy for one man to lift, and the smallest one, a fascinating wee thing, ¾ x ⅝ x 3/16 inches, the subject being a sermon in a kind of shorthand, written in 1654 by a divine who boasted that he "could write so small that none might see his pen move."

Perhaps the most human of all the ancient documents is a Greek fragment of Papyrus dug up at Oxyrynchus, 120 miles south of Cairo, and written in the second or third century by a Greek schoolboy: "Theon to his Father, greeting," it says. "It was a fine thing of you not to take me with you to town. . . . Mother said to Archelaus, 'He upsets me, take him away!' So send for me, I implore you. If you won't send, I won't eat, I won't drink. There now." The first recorded hunger strike!

Above the book cases hang portraits of the Founder and a solemn line of Librarians, but at the end of this passage the most lovely part lies before us—Duke Humphrey's or the Old Reading Room, opened in 1480 and not materially changed since, except that in 1602 Bodley put in the beautiful ceiling that is still one of the wonders of Oxford. On every other corner of the block oak panels is painted the escutcheon of Sir Thomas Bodley, with his curious scroll, *"Quarta perenius erit"* (and the Bodleian being the fourth library of the University has led them to adopt this as its device). And in every panel rest the still more beautiful University arms, with its incomparable motto, *"Deus illuminato mea."*

On each side of the passage down the center of this room are the alcoves, ten on each side, where, at broad old oak desks, the readers browse. Time was when these same desks were marked and marred by the chains with which each book was bound; now, however, all is fair and free, and in the open shelves at one's fingers' ends rest treasures such as give a bibliophile great content. At the time when Duke Humphrey gave his princely donation of 600 volumes (and in 1480 that *was* princely) this room was amply large. Gradually more books were acquired, so that in all there were two chests full, and these were lent out from time to time to needy scholars—England's first Public Library! Later—in 1320—Thomas Cobham, Bishop of Worcester, began the room over the north of the chancel of Saint Mary's for the better housing of the books which bade fair to outgrow the limits of the two poor chests in which the little stock had rested.

But with affluence came acrimony, and between the University and Oriel College there flourished so truculent a dispute as to ownership, that all Library schemes were held up until 1410, when, an amicable understanding having been painfully arrived at, books began to flow in so fast—probably as many as eighteen or twenty a year—that the available space was outgrown. Then it was that Duke Humphrey of Gloucester stepped in with his proposition that the space over the Divinity Schools be used. In all probability, the 600 books of his foundation included those brought over from Saint Mary's, since Mr. Madan, the lately retired librarian, says his gift

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was only 281 volumes, so it would seem that the rest was the accumulation of 263 years!

And now for half a century or more, we may imagine the Oxford undergraduate feasting in peace and quiet for the betterment of soul and mind, that is, when he was not otherwise occupied in hunting the wild boar, or the nearly as wild "townie" on the High Street with his bow and arrow. It is well known that his little pranks in the line of murder became so annoying that at last he was severely spoken to, and to this day upon matriculation, must subscribe to the University rule that he cannot roll hoops nor carry bows and arrows upon the High Street, nor play marbles upon the steps of the Bodleian.

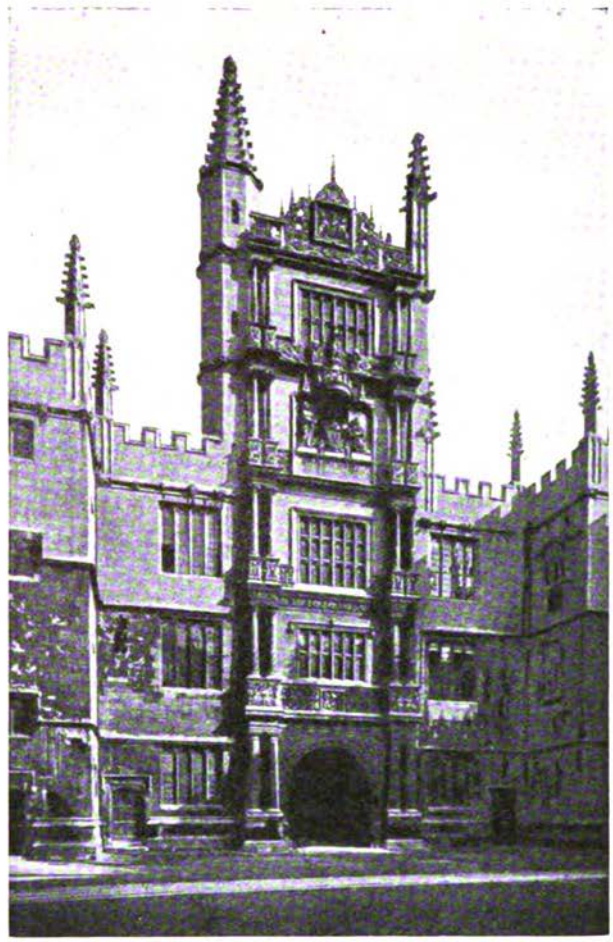
In 1550 came Edward the Sixth's Commissioners, whose ideas of reform led them to lay waste the whole place, only a very few volumes being spared, four of which the Bodleian still has, with as many more in the British Museum and University of Paris. Any book which was found to contain pictures of Saints was publicly burned, while the "less noxious things" were simply sold for waste paper. And so from then until 1598, "dead silence, bare walls, no books, no voice nor any that answered."

It must have been a dreary time in Oxford, when the old schools and the quad were used by the laundresses of the town as a drying yard and it was perhaps the very sight of this lamentable display where once had been such erudition that moved the pity of "a certain worthy of Devon" named Thomas Bodley, then an independent member at Magdalen. Artistic, tactful—"well born, well read, well traveled, well bred"—this young man, at 19 a Fellow of Merton, started out upon the life of a courtier and diplomat, and then, having easily acquired both fame and fortune, "concluded," to use his own words, "to set up my staff at ye librarie door in Oxon," having, as he deemed, the four kinds of aid necessary for success in founding and carrying on the Library:

"1st. Knowledge of tongues and literature.
2nd. Purse ability.
3rd. Great store of honourable friends.
4th. Special good leisure to follow such a work."

Accordingly, in 1598, he sought and gained glad permission to undertake the restoration of Duke Humphrey's room, which, with its later additions, was hereafter called the Bodleian, after the fourth benefactor and founder, and on 8 November, 1602, it was opened with much pomp and display of its two thousand odd books—in that day no mean number, even for the "spacious times of great Elizabeth," and we may imagine how the eyes of the students of the day bulged when they saw the first "stall system" in England, all others up to that time having been of course "lectern"; in fact, Thomas James, the first Librarian, becomes ponderous in his praise of the "English Vatican," and describes it as "the true Ptolomee of our times," "the like nowhere to be found"—"open six hours daily!"—"books in thirty foreign languages" (Latin was, of course, not a "foreign language").

A masterstroke of Bodley's (then Sir Thomas) was the agreement with the Stationer's Company by which the Bodleian was to have, without payment, one copy of everything published within the realm. When one



OXFORD—SCHOOLS TOWER OF FIVE ORDERS

looks about one at some of the things in the bookshops purporting to call themselves by that honourable name—BOOK—one cannot help thinking that there may be those among the present library staff who are sometimes tempted to breathe a gentle curse upon Sir Thomas and his all-embracing cleverness. At any rate, this scheme and the growing popularity of the library, as well as that of its delightful sponsor, who lost no chance of acquiring, by assiduous cultivation of benevolent-minded persons, any literature which might be offered (and even gave his librarian definite instructions to follow up all such offers with as much haste as was compatible with good breeding) resulted in his library being for hundreds of years the first and foremost in the United Kingdom. In fact, such a hobby did it become with its fond founder that in 1611 we find Thomas More writing in a letter to a friend:

"Bodley, the other day, notwithstanding his many sums of money now due, was fain to borrow upon bond, and after that to pawn and sell his plate to finish his last building of the Library, the which doth cost him in all twelve hundred pounds!"

On 28 January, 1613, Sir Thomas Bodley died, leaving directions for a big funeral celebration when 100 pounds was to be spent on the dinner, and 68 gowns, one for every

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year of his life, were to be presented to each of so many poor students.

For 150 years after the Civil War immense donations were attracted to the Bodleian, one vast collection of MSS. indeed being so huge that the staff seem to have been so overwhelmed that it was nearly a hundred years before they were all catalogued and order was restored out of the chaos occasioned by this princely inundation. The catalogue of printed books is now comprehended in 726 huge folios, a vast work that grows ceaselessly.

In 1753 the British Museum was founded, but the Bodleian still held her proud place as premier library in the United Kingdom. Perhaps it was because her staff grew a bit lazy that by 1850 her rival had outstripped her. At any rate, in 1828 we find one story of a "savant inconnu," who, arriving at the door only to find it locked, although it was well past opening time, left pinned to the door this aptest of quotations in Greek:

"Ye have taken away the key of knowledge; ye neither enter in yourselves and them that would enter in, ye hinder."

Surely she is still a hero among libraries, well deserving her proud place as first among all the University libraries of the world, second among libraries of deposit in the English speaking world. According to Mr. Madan's figures (1919) the British Museum had 3,750,000 printed volumes, 60,000 MSS. The Congressional Library at Washington, (1915) 2,364,000—eighty miles of occupied shelves, more than double the shelvage of the British Museum, but not as many MSS. nor precious old books. New York he lists at 1,920,000 and Boston 1,050,000, whereas the Bodleian claims, of printed volumes exactly the same number—1,050,000; of separate pamphlets, 2,060,000; of MSS., 40,000; and of deeds and charters, 20,000. The total number of books of different titles (that is, of separate works) in the world he estimates at 12 millions, so it is not unfair that with such a percentage the Bodleian should claim eighth place in size and importance in the world.

The shadows have begun to lengthen as I write. The old man in the bath towel is stirring—turning a leaf before which he has been dozing this last hour; the Ghirlandajo portrait is packing his fine Greek notes in the little reticule he always carries; the three-spectacled individual is peering into his tome, looking as though he were longing for yet a fourth pair, if only his nose were long enough to accommodate them all.

A sudden clamour tears wide the soft quiet of the room—the monstrous clang of a great bell! I leap in consternation from my chair. Then I remember. No artificial light has ever been installed, so when the light begins to fail the Library simply closes, and this peal that so startled me is only Sir Thomas Bodley, his bell, announcing:

"Gentles all, we wish ye a very good day!"

FLORENCE S. CAMPBELL.

THE AUTOBIOGRAPHY OF AN IDEA and THE PORTFOLIO OF DRAWINGS by Louis H. Sullivan have been slightly delayed in the press but will be issued very shortly.

From Our Book Shelf

Reforming

Mr. Arthur J. Penty is an English architect who finds time to do a bit of thinking. He possesses a gift of clear statement, and a pleasant manner that establishes between author and reader relations of friendly equality. He impresses as eager to share, though not to impose, his views; does not irritate by over-combativeness, and proposes his solution of the more fundamental social and economic problems with evidence of real optimism.

His book[1] will be received with scant favor by those who affect that Polyanna philosophy which accepts as divinely ordained, or inherent in the nature of things, practically any evil, especially when "the other fellow" is the victim. Prosperous persons are disposed to brush aside any criticism of the existing order as merely querulous complaining of minds out of touch with reality, or natural reaction to self-admitted failure. Mr. Penty has no "crumbs of comfort" for such minds, nor for the merely disgruntled and cynical.

"Towards a Christian Sociology" is a book for enthusiastic youth. Young men and women whose outlook on life is clear and direct will read it and be inspired by it. It is not a preachment, nor of that type of militant advocacy of a cause which is offensive to sensitive minds. It is frankly an attempt to apply Christian philosophy to modern conditions and the philosophy is drawn more from mediæval than modern sources. In the opening chapter Socialism and Christianity are compared, the Christian form being taken as looking toward the permanent needs of human nature, while the Socialist considers all human needs, apart from the elementary food, clothing and shelter, "as non-essentials, subject to change and flux."

"It takes its stand on the supposed truth of a theory of social evolution according to which all social phenomena are to be regarded as relative, and human nature capable of infinite adaptation to changing circumstances. Its policy is therefore not directed towards a return to the normal, but towards the stabilization of the abnormal. All thought on social questions moves between these opposed conceptions, which have their roots finally in the teachings of Christ and of Marx, and the reason why there is so much confusion of thought on social questions is that most people, whether they be Socialists, Labourists, or Christians, fail to discriminate between the categories, vainly imagining they can compromise between the two."

He takes the Church to task for the divorce which has taken place in men's minds between things of the spirit and material affairs, apparently minimizing the fact that, rightly or wrongly, this well-nigh world-wide divorce was effected by the deliberate choice of men who had lost faith in the Church as qualified for dealing with worldly matters. He goes farther back than the Protestant Reformation and blames St. Augustine for sowing the seed that has borne fruit in modern times in the dualistic idea that has not only separated Church from State but religion from business.

Mr. Penty marshals some very interesting arguments

[1] "Towards a Christian Sociology," by Arthur J. Penty.

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for a return to some form of the mediæval guild idea, and it is here that he is at his best. The reader of "drum and trumpet" history will gain by the study of these pages a new viewpoint as to the much misunderstood "middle ages." A fascinating picture is presented of the social and economic life in the days that produced the Song of Roland, the "Summa" of Thomas Aquinas, and the great Cathedrals.

The problems of currency and the financial troubles which beset the nations, half of whom are unable to trade advantageously with the other half, are discussed with courage and frankness.

It would not be fair to Mr. Penty to attempt to give an abridgment of his statement of both problem and solution. That he offers a solution is noteworthy, for most of our economists are content with merely analyses of existing conditions and the underlying theory, leaving synthesis entirely to the mind of the reader.

In his chapter on "The Just and Fixed Price," Mr. Penty acknowledges indebtedness to Mr. Henry A. Wallace of *Wallace's Farmer*, an indication, surely, of more than ordinary reading and research. It is quite unusual for London to quote Des Moines.

Of special interest to architects are the chapters on "The Quantitative Standard" and "Machinery and the Subdivision of Labor." Among the authorities cited is Mr. Ralph Adams Cram, from whose book, "Towards the Great Peace," is taken a striking quotation. Mr. Penty is indebted also to Professor Lethaby, whose "Form in Civilization" has been reviewed in these columns.

With such an interesting book before him it is a temptation to the reviewer to become prolix and to tell too much of the author's story. He must needs remind himself that a review should merely hint at what may be the reader's pleasure. Unfortunately, appreciative seekers after truth are sometimes repelled by the professional "blurb." In the case of "Towards a Christian Sociology" let it be sufficient that, in the opinion of him who writes, to read the book with an open mind will help "to enter sympathetically into the great heritage of the past" and also "to face realistically the problems of the present."

WILLIAM L. STEELE.

More Composition

The title "Architectural Composition"[1] might naturally lead one to expect to find expounded something of the basic principles of design—perhaps the genesis of composition, proportion, taste—things that the architect has drawn in with the milk of academic training and which he has felt could undoubtedly be traced back to their primal causes.

Why is the division of base, shaft and cap particularly pleasing? Is it the analogue of nature's column, the tree? A very pretty treatise I'm sure could be made on the matter of symmetry and assymmetry, on the value of plan and its over-estimation as an architectural essential. Why does the inchoate plan of the Palace of the Doges produce a façade of scintillating beauty, while the greatest plan in the world is expressed by the dull and dingy exterior of St. Sophia? What of form and its expression of function? What of the revolution one should expect in composition when the last half century has seen structure become largely an organism of metallic tension, a body like a vertebrate with a skeleton and a skin? After 10,000 years of troglodyte compression, we are watching architecture stand up and reach its arms to the sky. But M. Varon has not told us anything about it. He has been content to point out obvious beauties by an analysis of the famous work of architecture drawn chiefly from the storehouse of the Renaissance. Nor are these examples sufficiently interesting or unusual, nor are these analyses erudite enough to give to the practised architect or amateur anything of which he was not previously aware; and while we are on the debit side of the ledger it cannot be said that the style is distinguished or that the small drawings which illustrate the book are, in execution or accuracy, what one should expect in a book on architecture by an architect.

These limitations will reduce the theatre of its reception to the classroom which is unfortunate as the title and the chosen chapter headings should have resulted in a book with a wider sphere of usefulness. The subjects of the different chapters which seem excellent and comprehensive to me are (largely in my own words) as follows: 1. The simplest forms of Plan elements. 2. Elementary Classic plans. 3. Plan elements, in famous compositions. 4. Semi-complex design. 5. Complex design. 6. Units of architectural compositions. 7. Rhythm. 8. Scale. 9. Expression. 10. Harmony. 11. Analysis of a plan in the relation to the foregoing.

A splendid program which perhaps M. Varon can elaborate, some day, in a more careful and distinguished fashion.

T. E. T.

The Romance of the Alphabet

Little things like the familiar letters of the alphabet, the very ones that are on this page, have a history, have parents, grandparents and great grandparents, and alas, some of them, a past! Originally adapted from pictures used in picture writing, they have, through a process of evolution, or, rather, as Mr. Goudy says, "degradation descended to mere arbitrary forms with little resemblance to their ancestors."

It is fascinating to learn, for instance, that "k" was once written ⋋ and also "IC"; that "I" now the simplest of our letters was once quite complex in the form of an angular "S" and later in the form of the Greek Sigma; that "P" was originally merely an inverted "L," the short horizontal stroke being curved inward gradually more and more so as to result in the present form. So Mr. Goudy tells a little story about each letter, in his book, "The Alphabet."[1] There are forty-odd pages of delightful, scholarly text, but the glory of the book is in the twenty-seven full-page plates, one to a character and each one containing fifteen beautifully drawn examples of the character illustrated and a historical note. It is difficult to describe the sheer beauty of these plates. It is quite as difficult to describe the satisfying beauty of the whole book.

[1] "Architectural Composition," by D. Varon.

[1] "The Alphabet" and "The Elements of Lettering"—Two books by Frederic W. Goudy.

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Less inspiring and almost commonplace by comparison is the companion volume by Mr. Goudy, "The Elements of Lettering," although similar in format to the first volume and equal to it in the quality of book making. The text is more meagre and less interesting and the plates are for the most part drawn from commercial types designed by Mr. Goudy. We feel that most if not all of the material of this volume should have been incorporated in "The Alphabet," where it would have come in natural and appropriate sequence.

Exquisite craftsmanship is the outstanding characteristic of these two books—craftsmanship such as was the glory of the time when to be a good craftsman was an honor among men. The pages of these books are concrete manifestations of Mr. Goudy's ideals in typography. The types used in the text were designed by Mr. Goudy and set by Mrs. Goudy. It is doubtful if in any other modern books can be found such a rare combination of good paper, beautiful type and setting, and excellent printing. The American Institute of Architects has seen fit to honor Mr. Goudy as one of the outstanding craftsmen of the day by bestowing upon him its gold medal for craftsmanship. Every member of the Institute should have in his library these two books, not so much for the purpose of copying letter forms from them, nor even for the purpose of studying them, but for the inspiration that may be had from two well-nigh perfect examples of a craft so intimately useful in his art.

BEN J. LUBSCHEZ.

Things Grecian

In these days when men are turning everywhere, away from the present, for the present offers such an inadequate compensation in terms of life that no one gets much enjoyment out of it and by one means or another seems to be bent upon escaping from it, the tide of illusion and the current of dreams and the shining gleam of vision find easily the voyagers who would go hither and yon, where life once seems to have been an efflorescence of expression and when the ills of it and the hardships of it were eclipsed and outweighed by a constant creative endeavor. The turn to Greece is one of the easiest ones to take. Greece has been celebrated these many centuries and her record is written in terms that can be read by the multitude. If we may not ourselves wander amid the scenes of a history and a lore that weave such spells of enchantment, then the camera may be a useful spur to put to dreams, although there are moments when we are ready to confess that nothing has so stifled the creative instinct of modern times as the possibilities for copying that have been evolved by the camera. Time was when men went to see things and to understand, by intimate contacts, the spirit behind them.

[1]Picturesque Greece is at least not devised so that one may copy from its pages. The details are lacking, happily, and one may ride with free rein among the imagined ecstacy of a people that knew how to create such a setting for their existence. I have turned the pages over and over and marvelled only at that. What was the secret? Where is it locked away? For along with the legends and the myths, and the wars and the feuds, and the slave and the freeman, something was riding high on the wave of a great and common heritage—an environment in which men must have moved on a vastly higher plane than that amid which we moderns are wont to go about our business and seek our pleasures. Picturesque Greece is a sort of epitome of the wonders of that secret which has been lost these many years. It is a fairy wand or a magic carpet by which we are transported, and what better book can one have? H. C. B.

[1] Picturesque Greece. 176 full page illustrations.

Obituary

JOHN BEVERLY ROBINSON

Elected to the Institute in 1901; to Fellowship in 1910
Died at St. Louis, Missouri, 11 November, 1923

Professor Robinson was born in New York City 10 June, 1853, and was the last living member of the fifth generation of descendants of Col. Beverly Robinson, who organized a regiment in the War of the Revolution. He was graduated from Columbia University in 1872 and was a member of the firm of Thayer & Robinson, New York City, 1882-97. During 1897-1910 he was deputy superintendent of Public School buildings in N. Y. City.

In 1899 he published "Principles of Architectural Compositions" and in 1908 there appeared "Architectural Composition." There followed in 1916 the "Economics of Liberty" and thereafter he was a frequent contributor to periodical literature, setting forth his fine human philosophy of human relations, the banishment of fear and force, and the setting up of an era of genuine fraternity.

He retired from the architectural school of Washington University, of which he had long been the head, in 1917 because of failing health. He is survived by his widow and by his daughter, Mrs. W. McKim Marriott, and two sons, Beverly and Devereux.

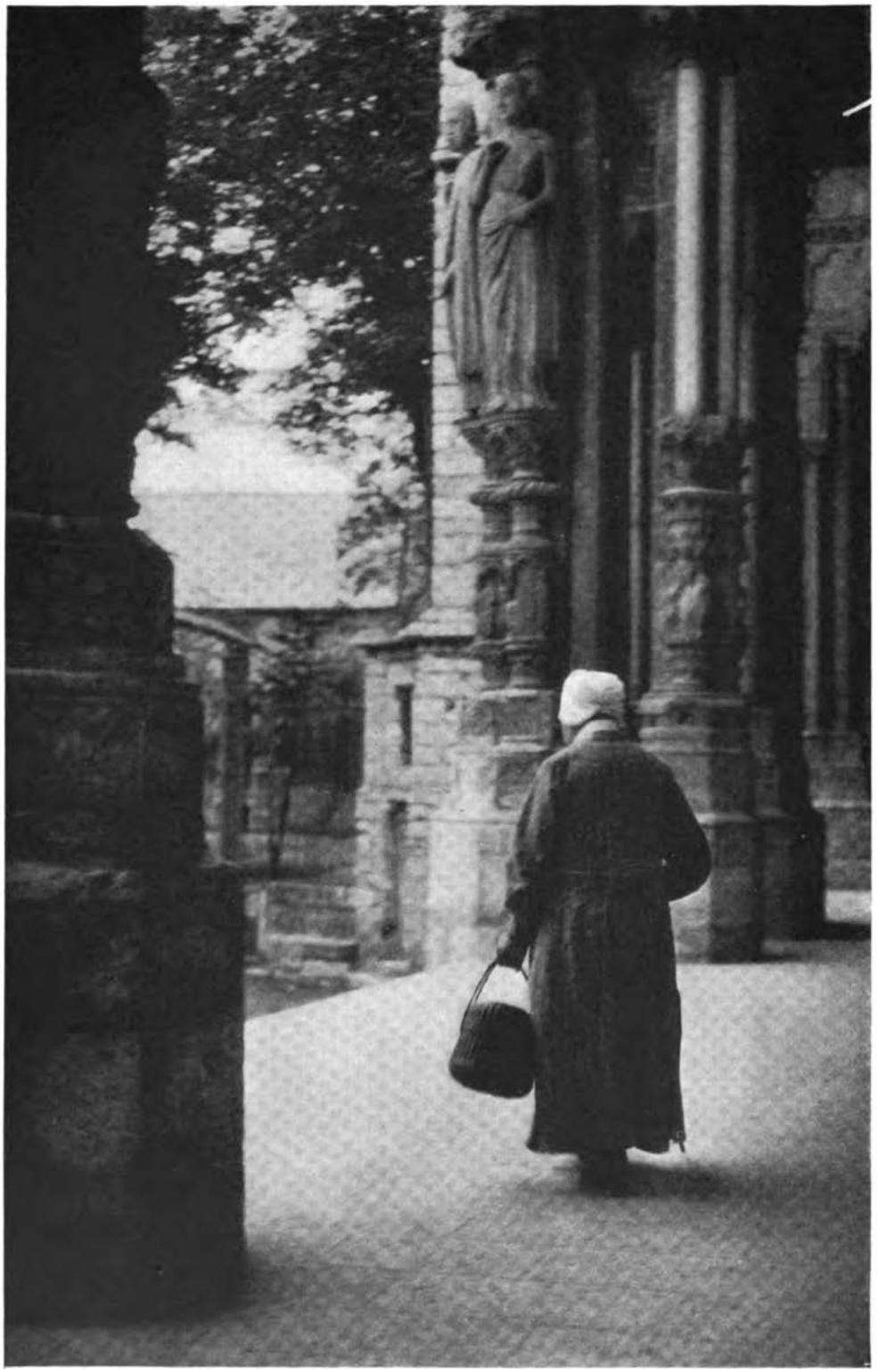
THEODORE C. LINK

Elected to the Institute as a Fellow in 1889
Died at Baton Rouge, Louisiana, 11 November, 1923

Mr. Link was born in Wimpfen, Germany, in 1850, and received his academic education at Heidelberg, London and Paris. In 1893 he joined with William B. Ittner and Fred Rosenheim in the firm of Link, Rosenheim & Ittner, and in 1896 he became a partner in the firm of Link & Trueblood. He was active in practice up to the time of his death, which found him engaged in the work of large buildings for the Louisiana State University and the State Agricultural College. He was the designer of the Union Station and the Washington University Medical Building, including Barnes Hospital, at St. Louis. He was a member of the commission of architects for the World's Exposition at St. Louis in 1904 and the designer of the Mississippi State Building and the Metallurgy Building. For three years following the war he was engaged in important work for the State of Mississippi in the designing of educational and benevolent buildings at Jackson. In addition to these more prominent structures his work covered an extensive range both in character and in territory. He is survived by his widow and by two sons, Clarence V. and Edwin C. Link.

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CHARTRES
Photograph by
Harold C. Whitehouse

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JOURNAL OF THE
AMERICAN INSTITUTE OF ARCHITECTS

Vol. XII FEBRUARY, 1924 Number 2

A Little Tour In Spain

Photographs by the Author

SPAIN seems like a room long locked, at the far end of a neglected wing in an old house. It is a room filled with strange treasures and the trappings of an historic past. Legends have grown up around these treasures and tales have been told that make the blood tingle and set the imagination on edge. Lands richer in art, such as Italy and France, have suffered by familiarity and their sweetness cloys a little from too much telling. They have been mapped and charted. Streams of tourists have made the beaten paths easy to follow, but Spain, geographically aloof, wrapt about in her ancient dignity and dreaming of her bygone grandeur, has made no sign of self-exploitation as the world marched on. Castles in Spain are less familiar castles and dominate their hills and arid landscapes with all the tremendous and awe-inspiring authority of romance. The sun shines hotly on tawny villages, on glistening white towns, on mosque, cathedral and monastery; on crumbling ruins and proud towers and on mighty masses of masonry which defy the tooth of time.

Spain has had ardent lovers, but for the most part they have been discreet and have not vulgarized her charm. Washington Irving sentimentalized in the Alhambra, as who would not, musing on the loveliness which the caliphs had created. But the divination of Gautier went deeper. His *Voyage en Espagne* is a masterpiece of keen and sympathetic observation and though written more than half a century ago, gives to the reader today the very color of the country and the strong essence of the people. Gautier felt the indomitable granite of Castile and the wild and rugged landscape in the north no less keenly than he responded to the softer blandishments of Andalusia. As an artist his insight penetrated to the racial qualities which underlie the art of any people and his comments have the critical value of interpretations. Richard Ford's book, published in 1840 by Murray as a guide for travelers, is another record of shrewd and canny observation. Ford traveled from end to end of the Peninsula on foot, on mule-back and by diligence and set down his impressions of manners, customs, landscape, architecture, food, festivals and folk-lore, with the candor and precision of a conscientious historian and the animation of an alert gossip. And though times have changed and the railroad and the automobile have succeeded the diligence, the strong flavor of Ford's experiences may be tasted yet. Though the days of brigandage are over and the larger cities like Madrid, Barcelona, and Seville wear a touch of modernity and flourish with a certain cosmopolitan swagger, their background remains mediæval. To turn aside from the not always straight but reasonably narrow path of the railway, still demands a fortitude like Gautier's or Ford's and a zealous curiosity like that which inspired Street a little later to explore and to seek out and analyze the Spanish architecture of the Gothic period. Since then, wandering travelers have sketched in Saragossa, Burgos, Salamanca, and Toledo. Fortuny and Henri Regnault beckoned other painters to follow them to Granada; but the drawings of Prentice, with those of Street, until very recently comprised the major part of the modern architect's library of documents.

Spanish scholarship has been negligent of its heritage and it has remained for two Americans, Arthur Byne and Mildred Stapley, to discover Spain for the Western world. Fifteen years of indefatigable adventure and research by them have produced the books by which the architecture of Spain is known today. The individual and strongly marked characteristics of the Renaissance work of the sixteenth century have been recorded and chronicled by them. They have measured, drawn and photographed the Rejeria of the master smiths and the wooden ceilings of Moorish, Mudejar and Spanish workmanship. They have

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described the furniture and domestic arts of a feudal civilization. They have interpreted and analyzed the delights of the hillside gardens of Granada and the subtle charms of the little planted patios which the Moors taught the conquered Spaniard to enjoy. All good Americans who go to Spain, and they are increasing in number, drift inevitably to the hospitable foyer of the Byne's. And those travelers whose footsteps may be guided along the Spanish by-ways by these accomplished docents are fortunate indeed.

Mention should also be made of Miss Georgiana Goddard King, whose articles on Spanish architecture have appeared in the JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS, and whose "The Way of St. James" is a most delightful and scholarly piece of Spanish history; her architectural researches for the Hispanic Society of America offer a valuable contribution to our knowledge and joy of Spain and things Spanish.

BURGOS

Two main highways enter Spain from the north. One passing through Toulouse, Narbonne and Perpignan crosses the border at Port Bou, touches Gerona in the old province of Roussilion, and follows the shores of the Mediterranean to Barcelona. The other strikes southwestwardly from Paris toward Bordeaux and Bayonne and turns the wall of the Pyrenees at Hendaye on the French frontier and Irun on the Spanish. This is the route of the Sud-express which links Paris with Madrid via San Sebastian, Burgos and Valladolid, and it may be called the line of least resistance.

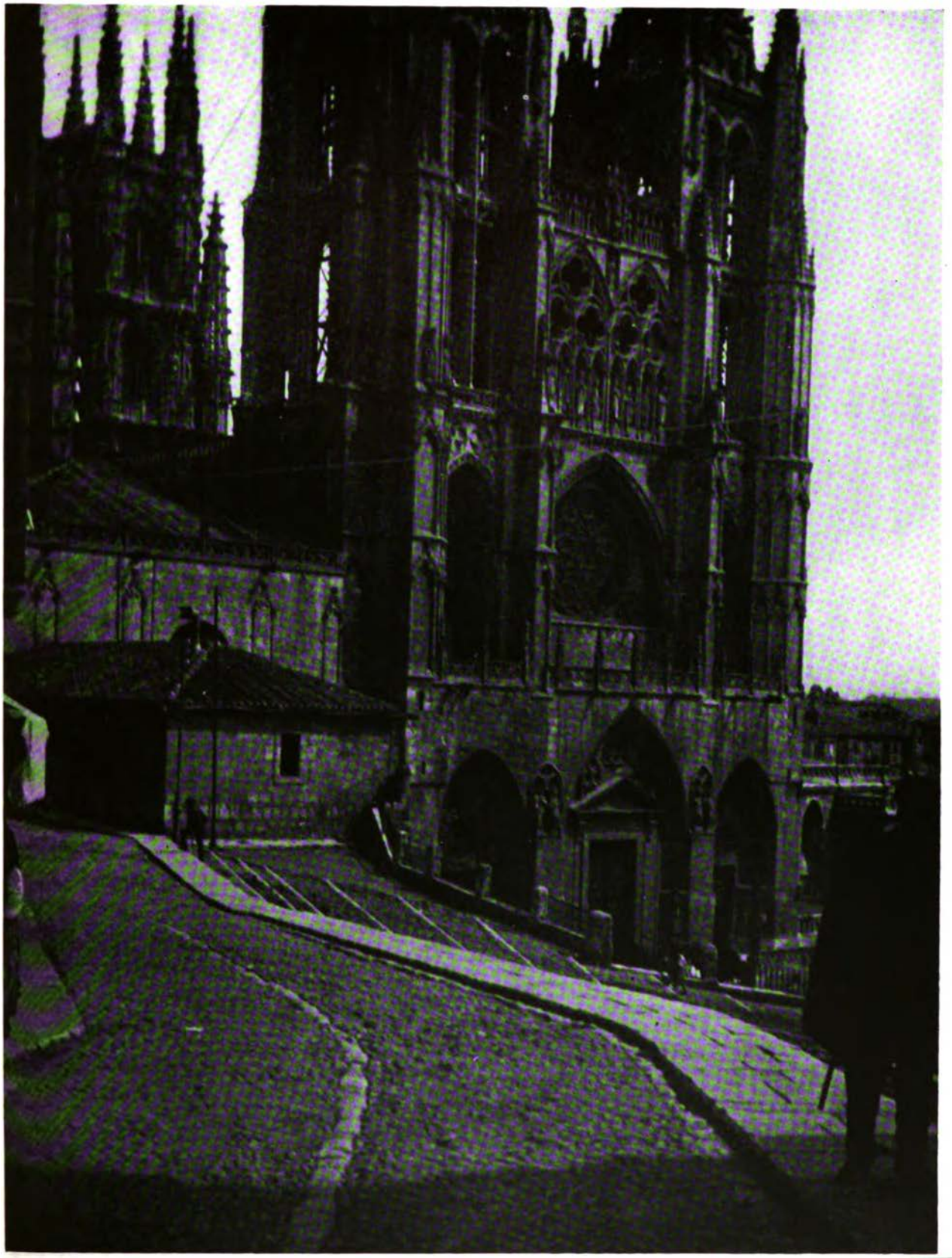
Tile roofs and the long raking pitch of flat gables mark a difference in climate and customs as the valley of the Loire is left behind and the road winds down toward Bayonne. The little round caps (boina) of the Basques dot themselves about the hilly streets of Biarritz and along the Esplanade; and, when the *douane* at Hendaye has been passed, the smiling image of France is suddenly erased. Grave, handsome gentlemen, girls with flashing eyes and black hair, and ladies whom middle age inclines to stoutness make up the summer crowd at San Sebastian. In the casino one recovers a little of France, a little of all the world; but once aboard the *rapide* again, whirling south, there is only Spain. A touch of fierceness in the landscape, features of almost dramatic composition as the road follows the wooded gorges and bores through the dark mountains, make the mild and gentle gardens of Touraine seem far away. At every wayside station the towns-folk, peasants, priests, soldiers and beggars are apparently making holiday. And slowly walking up and down, endlessly as Time is endless, the two Dromios of the Guardia Civil embody the majesty of the law. Their dignified demeanor strives to belie their operatic costume. At first we thought them twins whom some fond mother, loving each in equal measure, had decked out *cap-a-pie* in costumes identical from their tri-cornered patent-leather hats, button for button, down to the soles of their boots. Each was belted and each wore a broad yellow patent-leather sash stretching diagonally from his waist over his shoulder. Each was sallow and grave and somber; and each, as though solemnly resigned to disaster, carried a musket. I am told that the Guardia Civil is a superior body of men, and I can well believe it, for the costume calls for character. We never saw one of them demean himself aught but decorously.

The journey from San Sebastian to Burgos by rail consumes six or seven hours and, as we had left the brisk and fashionable city by the sea at about half-past four, twilight fell before we reached Miranda de Ebro, where we alighted and thronged into the clattering railway restaurant for our first Spanish *comida*. It was very fair, as the guide-book says, and Gargantuan, as Spanish dinners are. When we resumed our journey night had enveloped all the world. The train sped onward, rumbling through tunnels and climbing toward the uplands of Old Castile. We soon left the mountains behind us and peering into the darkness saw only here and there a flickering lamp across the level distance. At each dimly lighted station, however, the crowds walked back and forth and our two friends of the Guardia Civil slowly peregrinated to reassure us.

It is a mistake to approach so fine a city as Burgos, with its dominating Cathedral, by night. Yet the reverberating ride in the hotel omnibus through the stony streets, across the bridge, along the Paseo and under the massive Arco de Santa Maria is not devoid of sensation. Coming from under the archway into the little Plaza del Duque de la Victoria, the Cathedral looms in its great bulk. We rattle past the blank wall of the Claustro—catching a glimpse of heavily barred windows—and draw up with a flourish before the Hotel Norte y Londres. Its interior is ablaze with light and its Art Nouveau decorations, of which Madame is frankly proud, startle us out of our mediæval reveries. Madame has no English but speaks "Français." Very carefully and precisely she speaks it, and we are put away for the night in fleckless quarters. Gautier's time was more romantic, but ours is, after all, more comfortable.

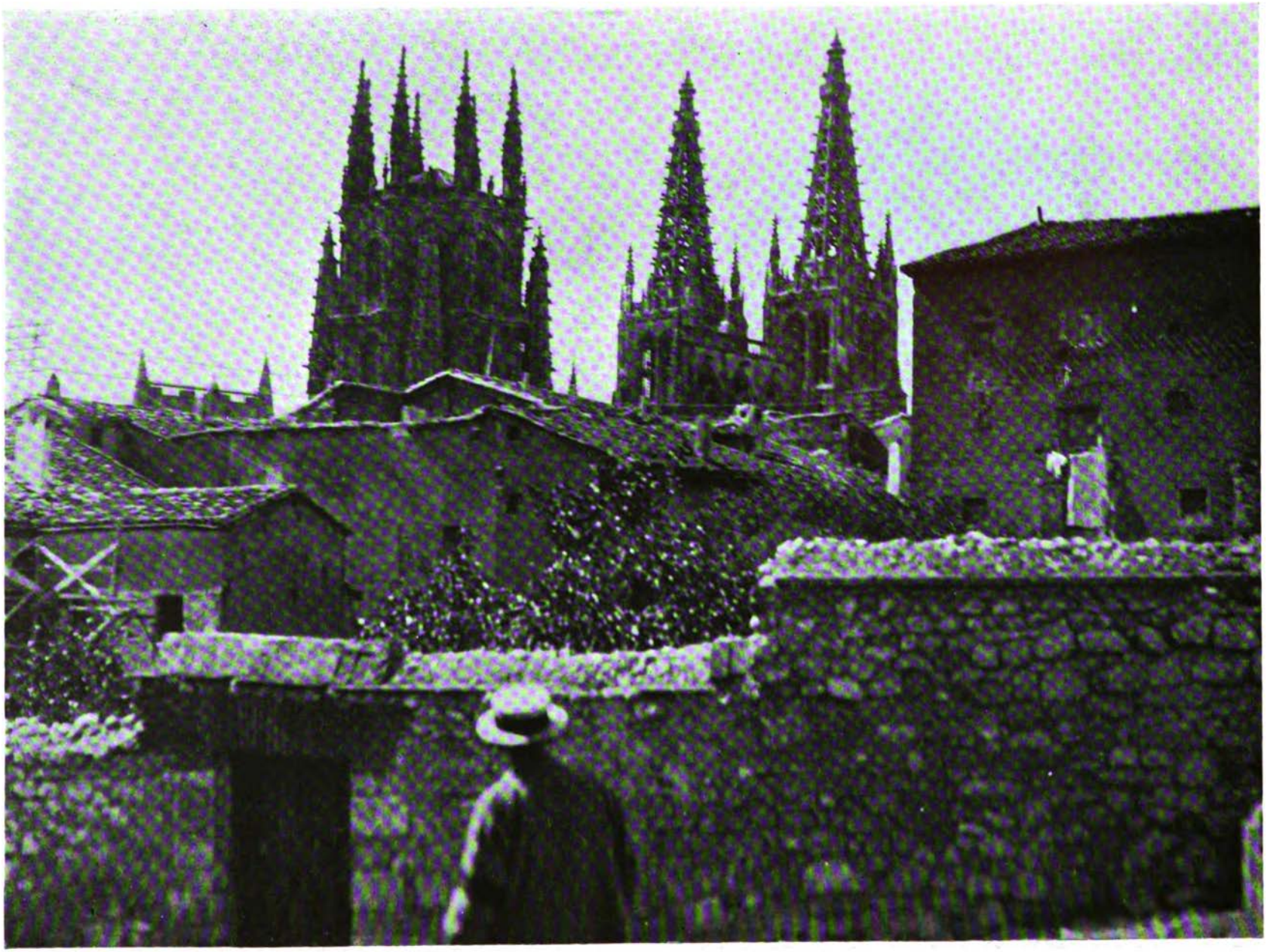
The great pride of Burgos is, of course, the Cathedral, and thither we took our way bright and early in the morning. We walked around it seeking points of view, but it is so a part of its surroundings, so hemmed in and clustered about with fervent and adoring constructions that lean toward it and cling near it that its complete majesty can only be appreciated from a long way off. Its spires strike upward into the sky as though to breathe more freely, and their lace-like perforations seem to invite the sparkling air to enter through and caress them. The higher they go the

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BURGOS—THE CATHEDRAL

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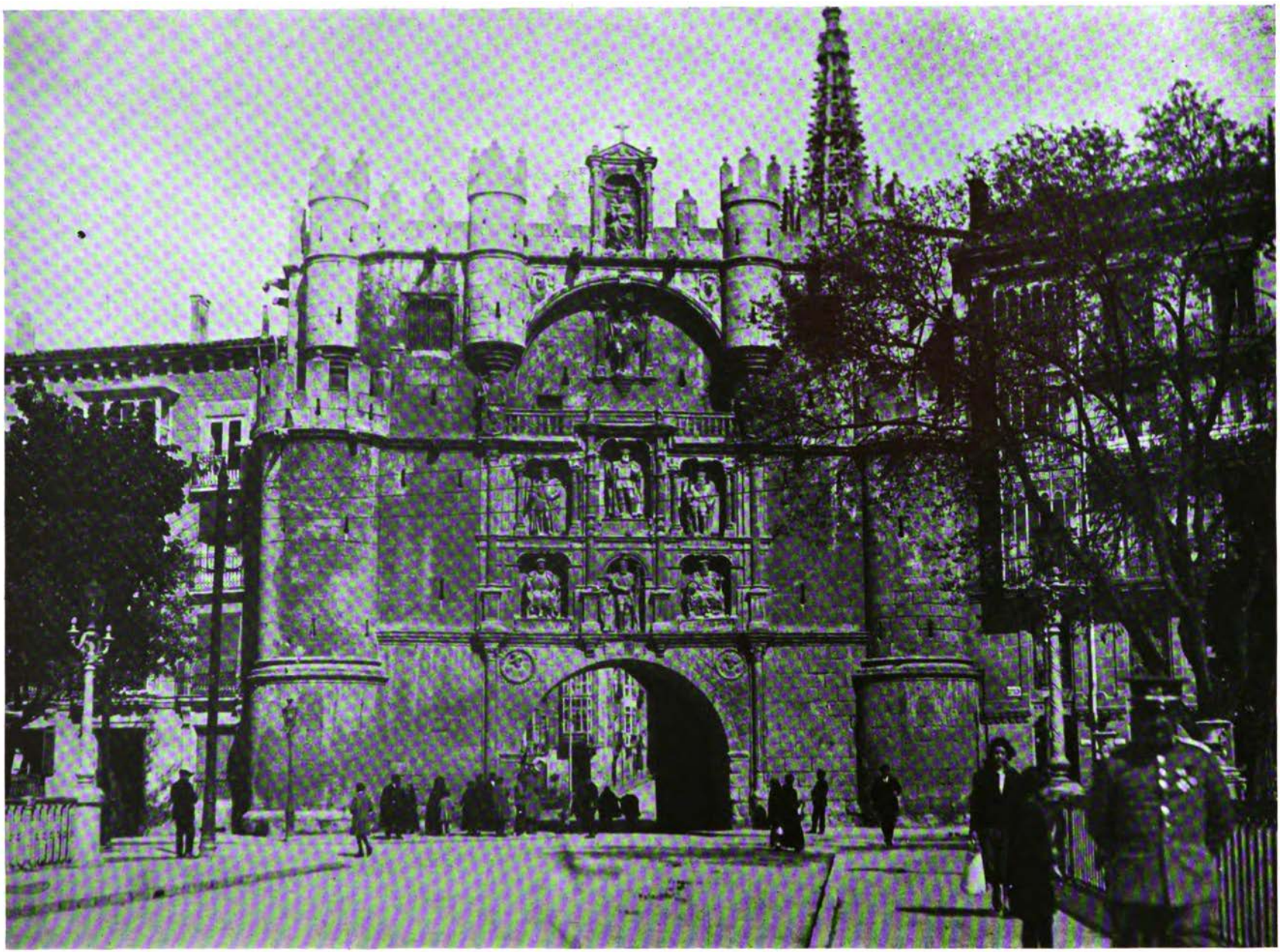
BURGOS—THE CATHEDRAL

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BURGOS—THE CATHEDRAL

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BURGOS—ARCA DE SANTA MARIA

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BURGOS—THE CATHEDRAL

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more fragile they become until they appear almost as light and sparkling as the air itself. They were built about the middle of the fifteenth century by Hans of Cologne, although the foundations of the Cathedral were laid 300 years earlier by Bishop Maurice, an Englishman. "It is not a little curious," says Street, "and perhaps not very gratifying to the *amour propre* of Spanish artists, that in their great church the two periods in which the most artistic vigor was shown, and the grandest architectural works undertaken, were marked first by the rule of a well-traveled Bishop—commonly said to be an Englishman—who seems to have employed an Angevine architect; and second, by the rule of another traveled Bishop, who, coming home from Germany, brought with him a German architect, into whose hands all the great works in the city seem at once to have been put."

Yet though French and German architects may have introduced the Gothic style into Spain, they remained to become influenced by their environment, and Spanish Gothic, like Spanish Renaissance architecture, has a strong local and national flavor. Besides the two towers of Hans, Burgos boasts a rich octagonal lantern above the crossing, so carved and pinnacled and encrusted with sculpture that the lively Gautier assumed its stony population of saints to exceed the human population of the town. This octagon is borne by four massive piers in the plateresque style and its vault or ceiling, as seen from the pavement of the nave, is intricately carved. "On raising your eyes," again to quote Gautier, "you see a kind of dome; it is a gulf of sculpture, arabesques, statues, little columns, ribs, lancets and pendentives—enough to give you a vertigo. If you looked at it for two years you would not see it all. It is as finely crowded together as the leaves of a cabbage, and fenestrated like a fish-slice; it is as gigantic as a pyramid and as delicate as a woman's ear-ring, and you cannot understand how such a piece of filigree work has remained suspended in the air for so many centuries. What kind of men were those who made these marvelous buildings, whose splendors not even fairy palaces can surpass?"

Hans had a son, Simon, and this Simon built a chapel and yet another octagonal tower. The Capilla del Condestable behind the ambulatory surrounding the Capilla Mayor, or high altar, is apsidal in form and contains the fine tombs of the Constable, the Conde de Haro, who was also Viceroy of Castile and died in 1492—a date which good Americans can recall when all others may have fled. There are numerous other chapels in the bays off the side aisles—and they contain tombs, retables and paintings of bewildering richness. They testify to the religious zeal and material prosperity of Burgos and the changing fashions in which these were proclaimed. [1]The great exterior portal of the Constable's Chapel is one of the finest plateresque compositions to be found in Spain and the Escalera Dorada, that wonderful double staircase of nine and fifty steps, built in 1519 by Diego de Siloe and leading to the tiny Puerta de la Coroneria, is a monumental *tour de force*. Many architects, each in his period, have contributed to this mighty fabric. Even the restless, writhing Churriguera is represented in the Capilla de Santa Tecla. While we strolled about looking aloft or peering into dim recesses, marveling at the carved and gilded altars, or stunned by the sheer force of the Rejas, the priests seated in Philip Vigarni's Silleria were droning their litanies in the Coro. Other black robes flitted about, and kneeling figures, immobile as the effigies toward which they gazed with rapt devotion, gave evidence of the faith that had moved this mountain into being.

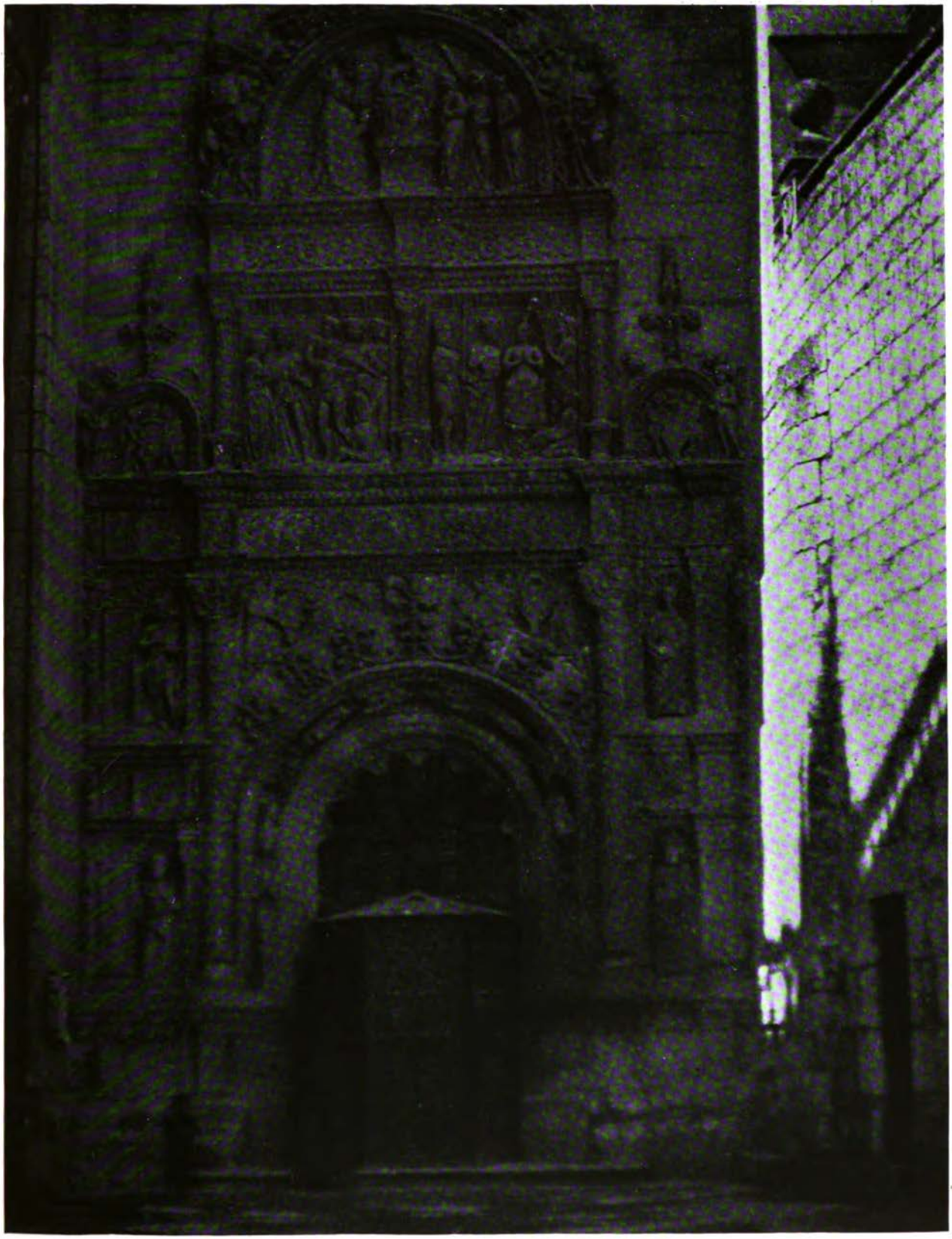
A verger, with practiced eye, recognizing the possibility of a peseta or two, beckoned us. We followed him out of the shadowy encrusted cavern of the church itself into the bright sunshine of the Claustro. Here all was lightness and joy. The lovely tracery sparkled in the sun, and in the overgrown tangle of the garden birds twittered, and two young ecclesiastics vied with each other in finding snails under the moist herbage. The cloisters date from the fourteenth century and the four sides of the patio are surrounded by a double row of arches in two tiers. Opening out of one of the eastern bays is the Chapel of Corpus Christi. Here may be seen the famous Coffer of the Cid—the chest which that hero filled with sand and pledged to the Burgos money-lenders who supposed it to contain gold or valuables. It is said that, being a hero, he afterward redeemed it.

The sunshine was bland and the air danced and tingled. Ramps and broad cobbly steps led us around the church and up the hillside into which the Cathedral is built. We stopped at the little church of San Nicolas to see the High Altar and the tombs, and then we climbed on up the hill, where children were playing and women were spreading their wash to dry. From the crest under the decayed ramparts of the Castillo, where the Cid was married in 1074, where 200 years later Edward I of England espoused Eleanor of Castile, and where in 1812 Wellington unsuccessfully besieged the French, we surveyed the silhouette of the Cathedral above the roofs of the town. A choppy sea of rugged brownish tiles undulated below us. We traced the bed of the Arlanzon and the circle of the bull-ring. To the right in a little copse of foliage could be seen the Monastery of the Huelgas and further on the Hospital del Rey. But, except along the Paseo, the glimpses of living green were rare, and the eye wandered over barren wastes of brown to the enfolding mountains in the distance.

There are other things to see in Burgos besides the

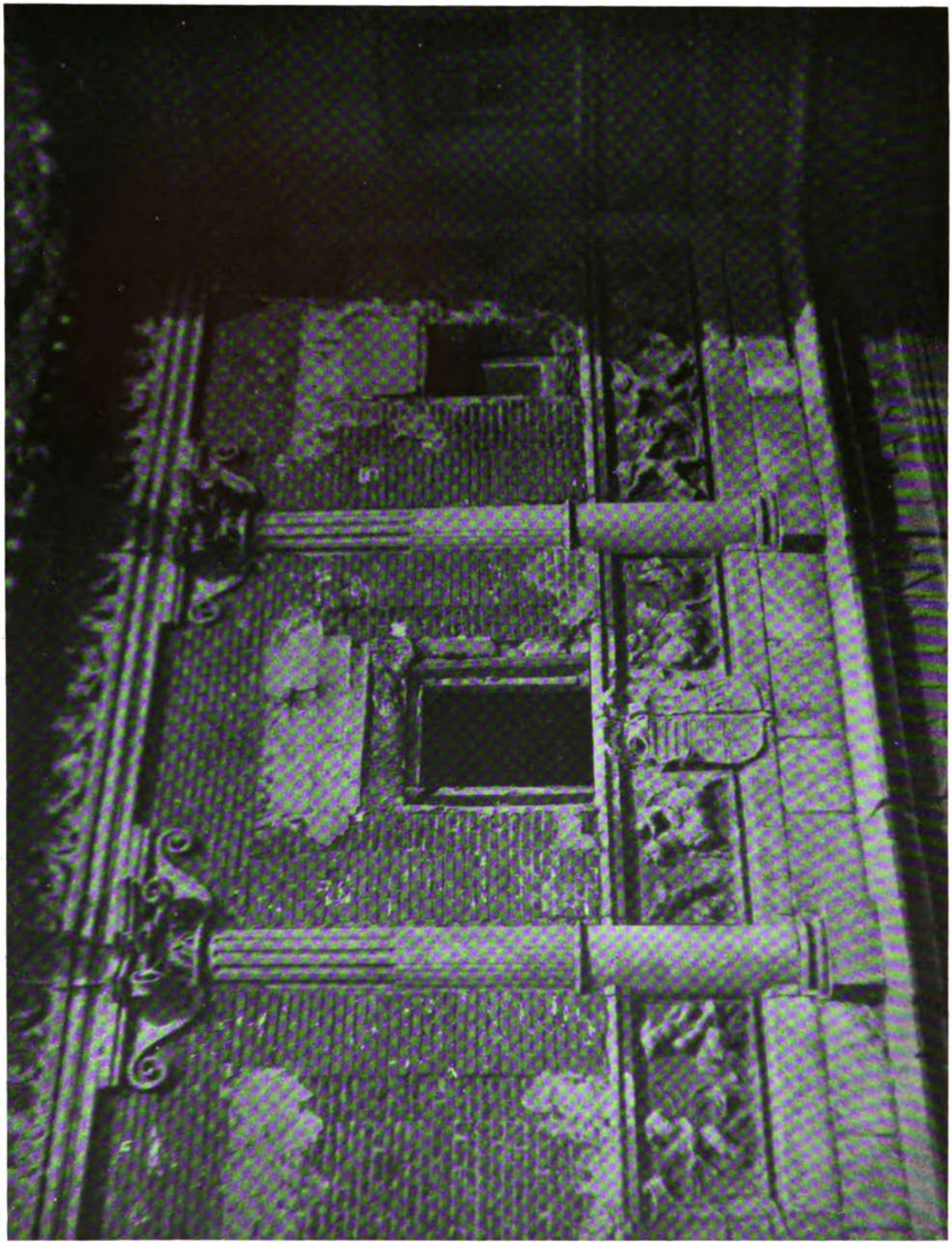
[1] More correctly the lower door of the north transept, called the Puerta de la Pellejeria, built by Francisco de Colonia in 1516.

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BURGOS—THE CATHEDRAL—PORTAL TO CAPILLA DEL CONDESTABLE

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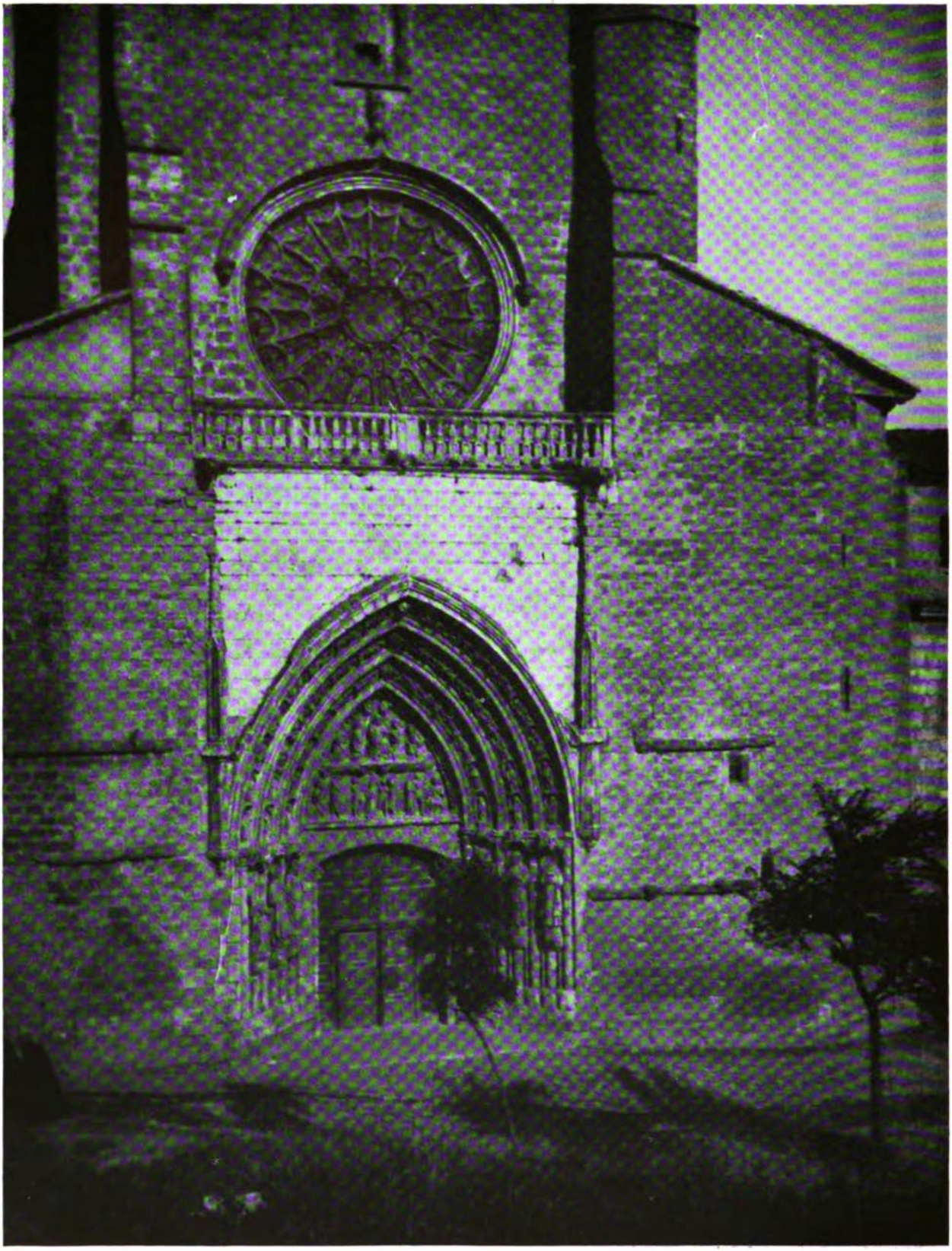
BURGOS—CASA DE MIRANDA

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BURGOS—SAN NICOLAS

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BURGOS—SAN ESTEBAN

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BURGOS—THE OLD PALACE

The Pennsylvania State College
State College, Pennsylvania

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Cathedral, although the Cathedral is the lion—the Colossus. It is a venerable town, having been founded in 884. It was the home of the redoubtable Rodrigo Diaz de Vivar, El Cid, who is supposed to have been born in 1026. For a time it enjoyed great prestige as the capital of Castile, but underwent various vicissitudes in the whirl of mediæval politics. As the government became centralized under Charles V the star of Burgos gradually declined, though today the city appears again to show signs of vigor and importance.

The Arco de Santa Maria, the strange and massive gateway through which we entered, was built to appease the Emperor Charles in 1536, but that busy monarch, although his effigy adorns one of the niches along with that of the Cid, was apparently not too much impressed. The Ponte de Santa Maria—a broad low bridge, leads from the gateway across the river to the Barrio de Vega. Here in the Calle de la Calera we found the Casa de Miranda and a number of forlorn Renaissance palaces. Their granite portals, with heraldic blazons and spirited sculpture, bear a kind of defiant witness to their departed grandeur.

The Casa de Miranda now seems to be a warehouse or a factory for making wine skins. We hunted up a workman, who took us into the once beautiful but now sadly neglected courtyard. The slender columns, with their corbelled brackets, are broken and eroded by time and weather. Several of the bays in the second story have been bricked up. The carving of the frieze under the projecting cornice and likewise that of the balustrade is blurred and sometimes all but obliterated. Even the making of wine skins did not seem to get on very happily and the great blown pigs' hides seemed to hang with an air of hopeless dejection. But all the children in the street know that this was once a great house, and they help occasional visitors such as ourselves to gain entrance. The eyes of our guide gleamed as we admired the fine vaulting over the stairway and the graceful strength and delicacy of the colonnades.

Returning to the river we followed along its bank to recross it by another bridge, the Ponte de San Pablo. The Arlanzon is a river in name only and though its banks are parapeted, as if to guard against a swollen flood, its green and grassy bed affords pasturage for goats and sheep and donkeys. Midway between its balustraded sides a tiny stream meanders as though only to maintain its franchise, and groups of kneeling women, to profit by its persistence, bend over the household wash. The views of the Cathedral as we strolled along under the trees were very fine. Some military function was on foot, for Burgos boasts a garrison as well as a priesthood, and smart-looking squads of soldiers went swinging by, led by smarter-looking officers. A blare of trumpets and the roll of drums announced a marching regiment and we stood aside in the narrow street to let it shuffle past. The men this time were dusty from a long march and many wore sandals, which made a padded, muffled sound as they strode by.

The Casa del Cordon, facing a little plaza, dates from the fifteenth century but has been restored with such spick and span precision that the sight of it dried our tears for the neglected Casa de Miranda on the other side of the river. The Gothic cornice and finials are hard and metallic and the gateway with the arms of the builder, the Condestable de Velasco, surrounded by a great carved rope or cordon—his wife's family being connected in some way with the Franciscan order—is more curious than beautiful.

Many of the newer façades in the narrow streets are marred by glazed bay-windows enclosing the second-story balconies as a protection against the rigors of the winter climate, for the plains of Castile alternate between the extremes of burning heat and bitter cold. There is enough of this sort of thing at home and, as sentimental travelers, we sought again the more picturesque by-ways in the purlieus of the Cathedral, the ramped alleys and long flights of steps leading toward San Esteban. This sturdy old church, with its square tower and squat bulky apse, has defied the elements since 1280. It is wrinkled and brown with age and there is something fortress-like and military in its ruggedness, despite its handsome portal and fine rose window.

The Church of the Cartuja is again the work of Hans of Cologne and his son Simon, and was rebuilt after a fire about 1454. The convent was founded by King John II on the site of the royal chateau. A few mild monks in white robes move about and with great courtesy exhibit the treasures of the place. These are treasures indeed and this little church contains two of the finest monuments in Spain, the tomb of King John and his wife Isabella of Portugal, erected by their daughter, the great Isabella the Catholic, and that of the Infante Alfonso, the young brother of the great Queen, through whose premature death she attained the throne. These are both by the master Gil de Siloe, as is also the gilded Retablo of the High Altar. The whole place is sweet and charming.

We drove back in the dusk meditating on the romantic history of this once great city of which, in many of its monuments, so fine a testimony of its stony splendor remains.

LOUIS LA BEAUME.

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BURGOS—THE CATHEDRAL—CLOISTERS

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BURGOS—SAN ESTEBAN

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A Greek Statue from Rome
See page 81

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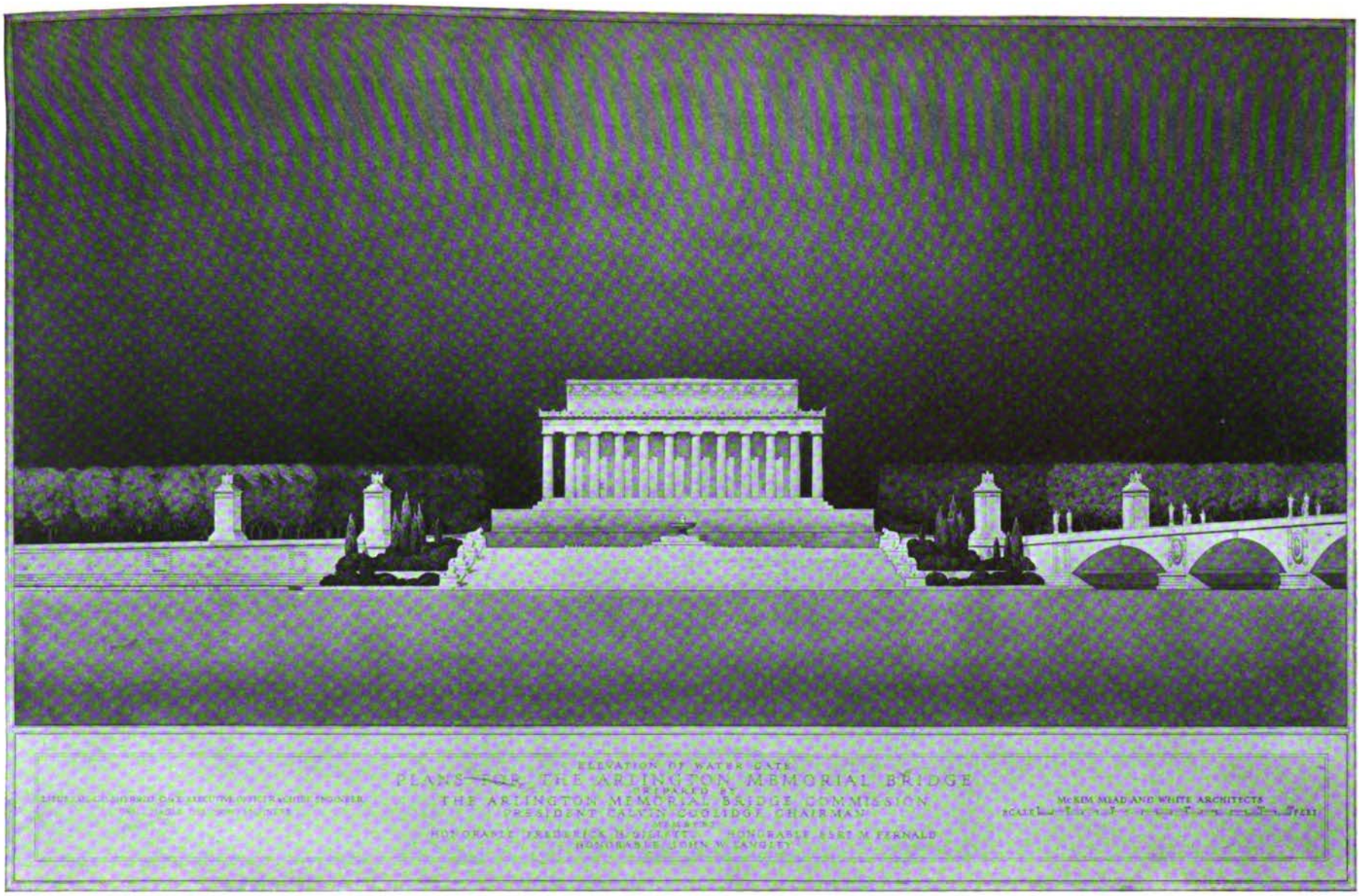
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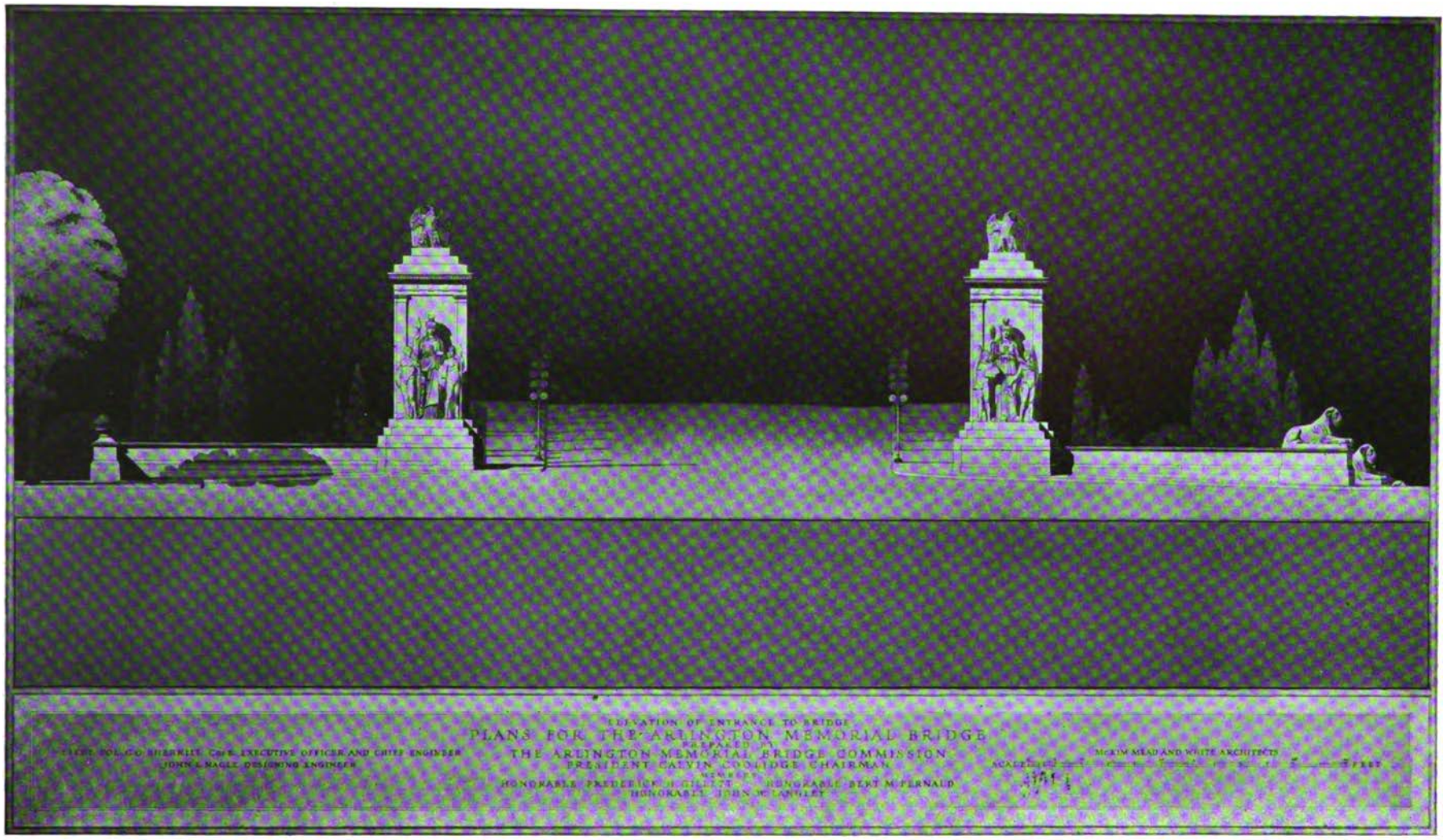
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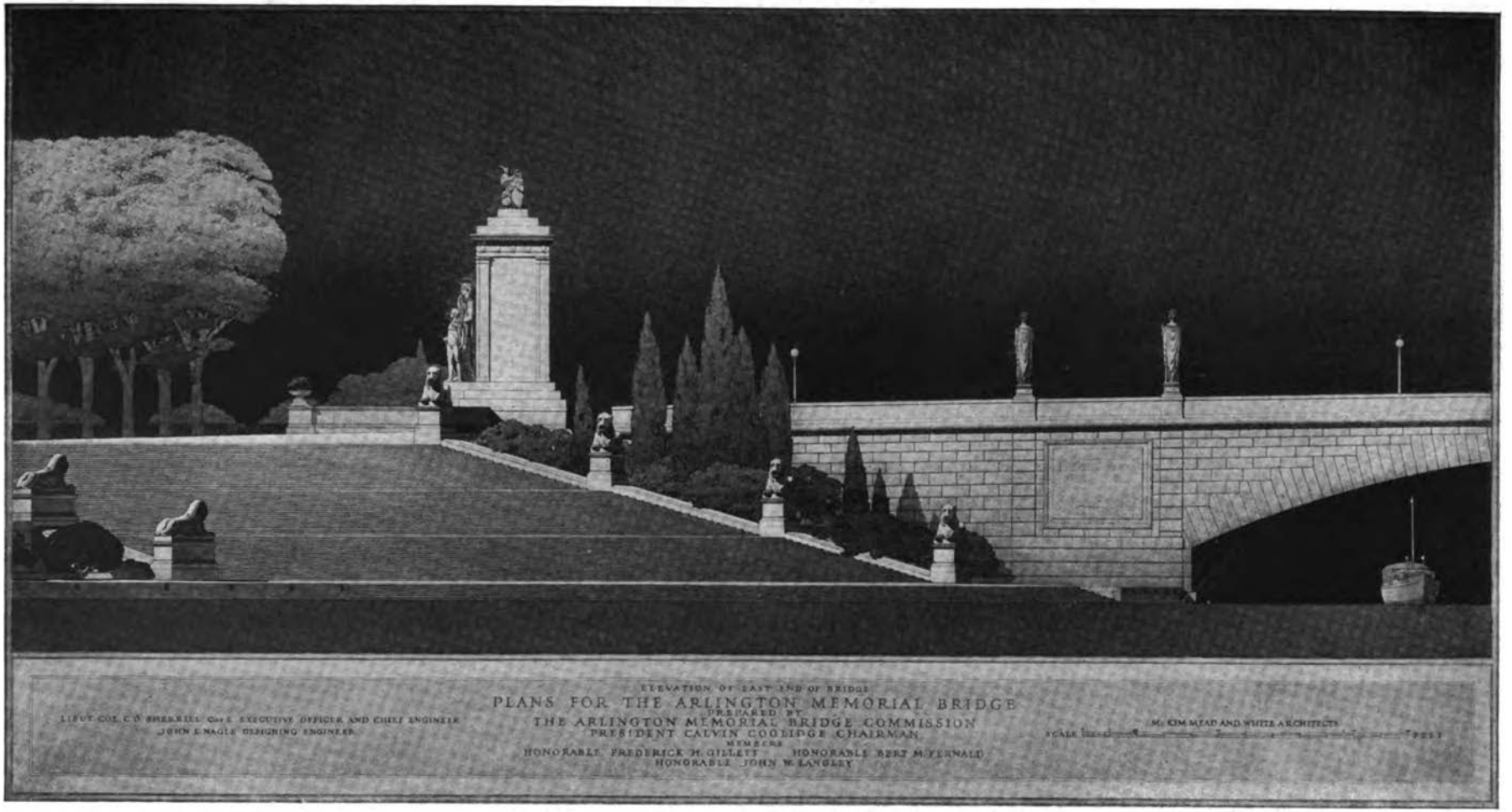
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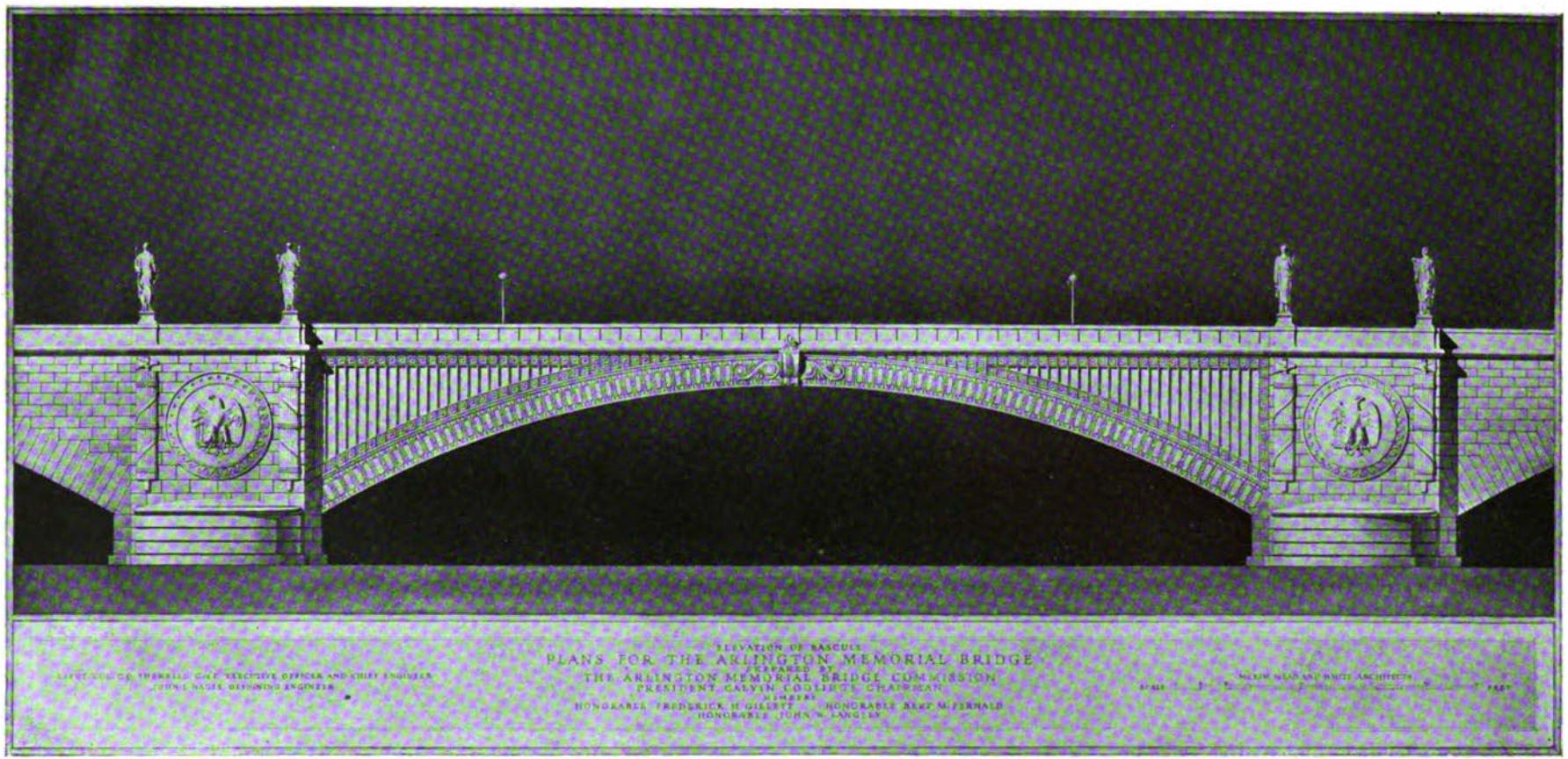
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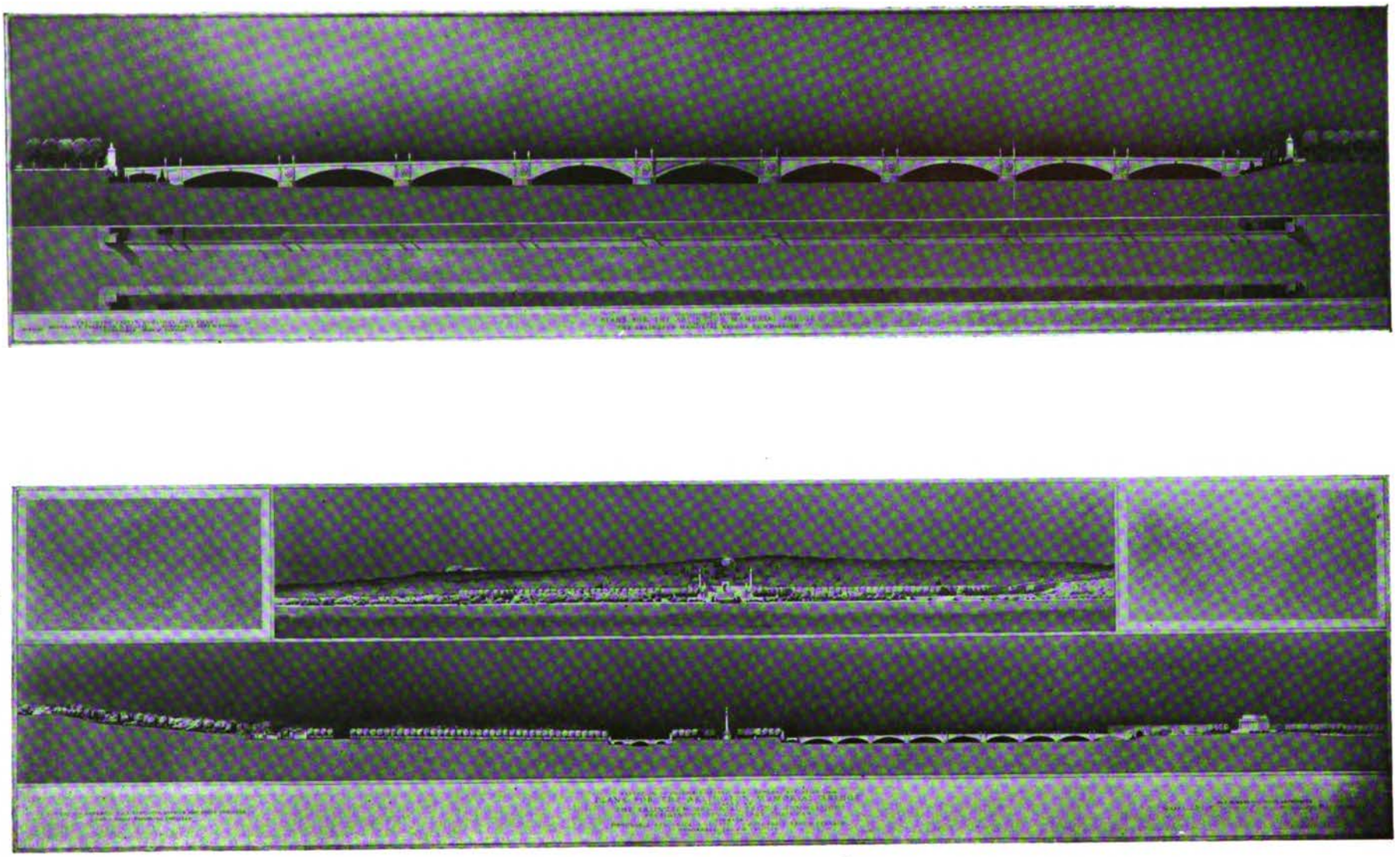
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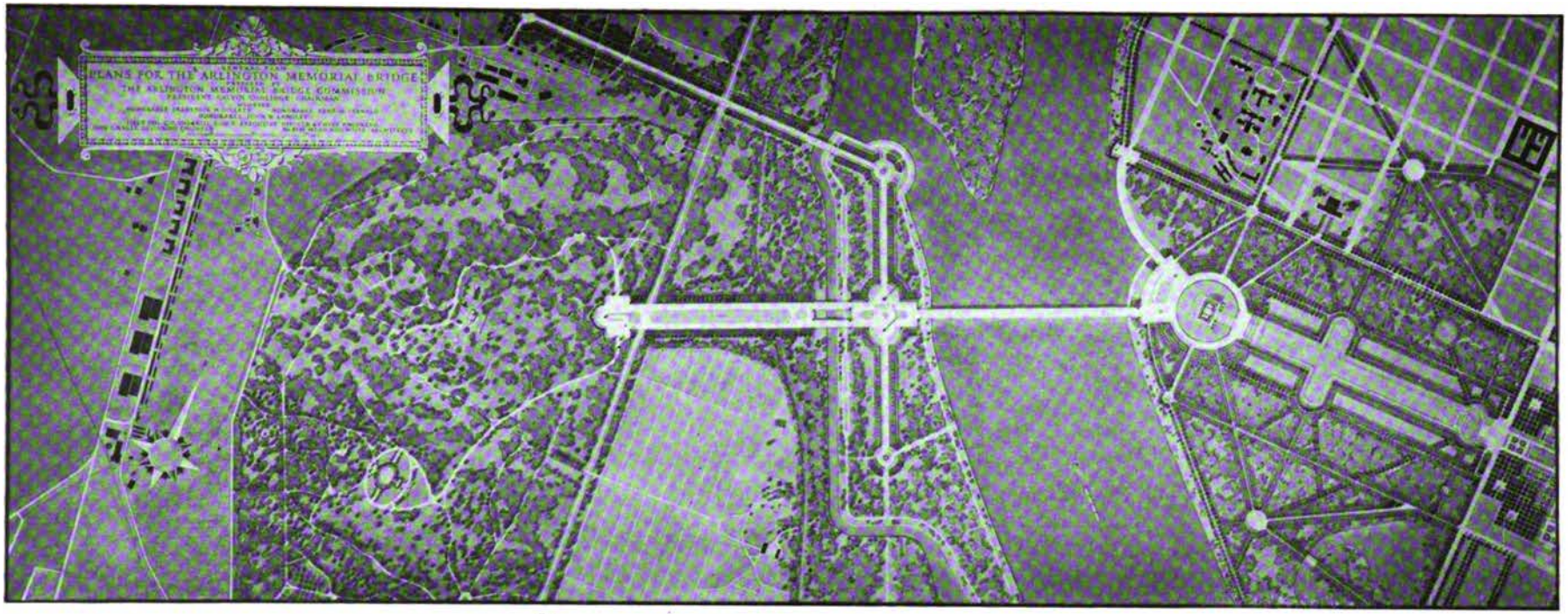
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A Reconstruction of the Basilica of Constantine in the Roman Forum*

Part I

Location and Exterior

In 307 A.D. a great fire destroyed the temple of Venus and Rome and the building along the Via Sacra,[1] giving the Emperor Maxentius[2] an opportunity to re-construct and re-adorn this section. He rebuilt the temple according to the earlier plan but replaced the warehouses for oriental products which stood at the north of the Via Sacra[3] by a monumental basilica,[4] the ruins of which still dominate this part of the city. (Figure 1.)

The building extended along the Via Sacra which formed its southern limit, from the side street which ran north along the side of the so-called *Templum Sacrae Urbis,* to the open space in front of the temple of Venus and Rome. At the north, the basilica adjoined the side wall of one of the buildings of Nero's golden house[5] between which and the basilica a street passed so that the latter was isolated on all sides. (Figure 2.)

Plan

As designed by the architect of Maxentius and before the changes, which will be described later, were made, the main hall of the building had the plan of a Roman Civil basilica. (Plate I.)

It consisted of a nave flanked by aisles and was entered

* The writers wish to acknowledge their indebtedness to Senator Lanciani for the use of his notes and photographs of the earlier excavations to the authorities of the Uffizi at Florence and the Kunstgewerbemuseum in Berlin for placing early drawings at their disposal, to Dr. Ashby of the British School in Rome, and to Director Stevens and the other authorities of the American Academy for suggestions and criticism.

[1] Chronica Minora I, Ed. Mommsen, p. 148.

[2] Maxentius restored Rome to the position of capital of the west. Milan had previously been made the capital of the province by Diocletian. Conservator Urbis Suae appears on coins of Maxentius, Cohen, Monnaies, Vol. VII, p. 171. Maxentius, Nos. 48 and 49.

[3] Throughout this paper the conventional orientation for the Forum and adjoining areas is employed, *i.e.*, the Tabularium is described as facing east rather than southeast, and other structures are orientated accordingly.

[4] Chronica Minora I, p. 146.

[5] Lanciani in Mélanges, 1891, p. 763, also plate III; Nibby, Roma Antica I, p. 51. Canina, Indicator, p. 77.

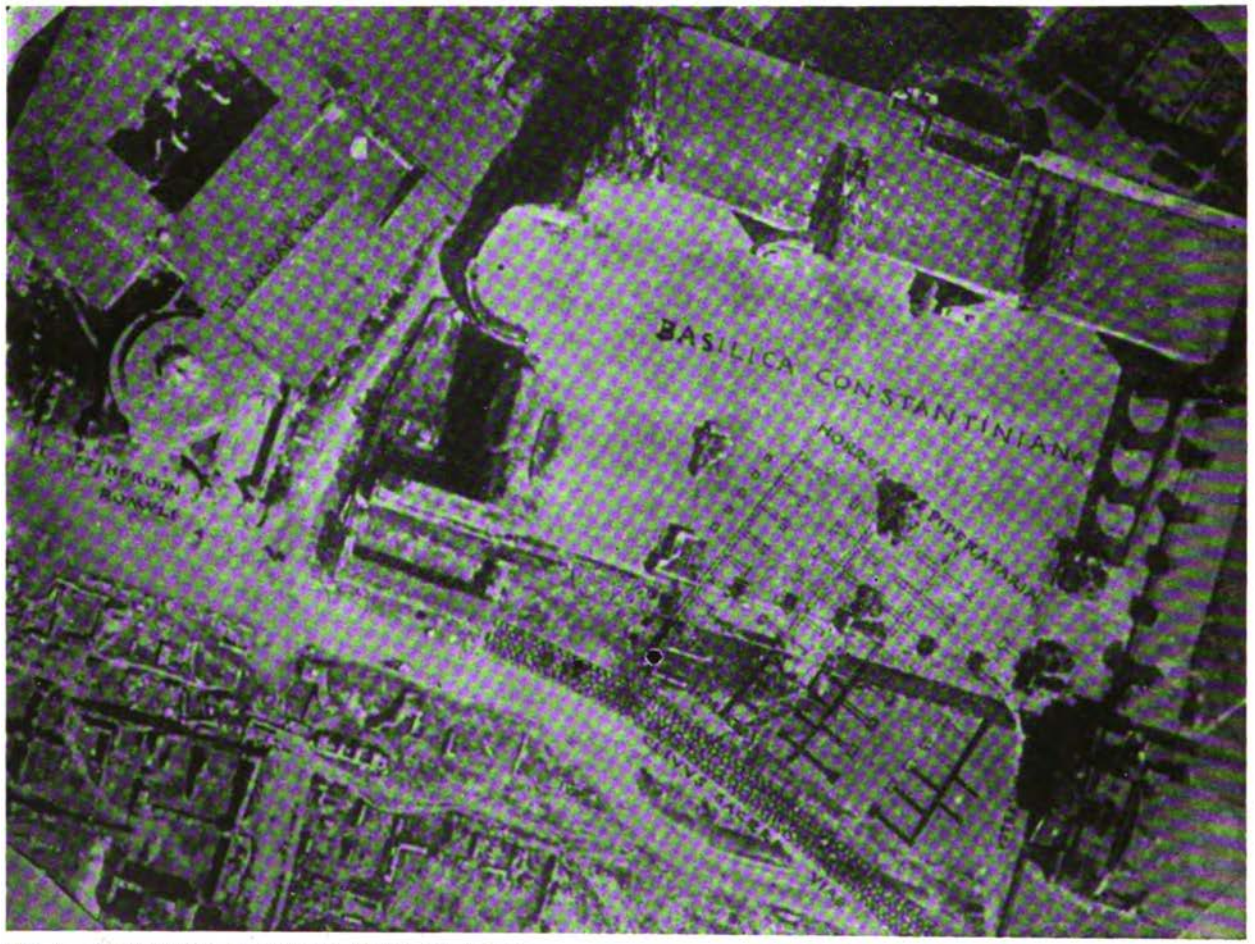


Fig. 1.—Photograph of Basilica From an Airship
Kindness of Senator Lanciani

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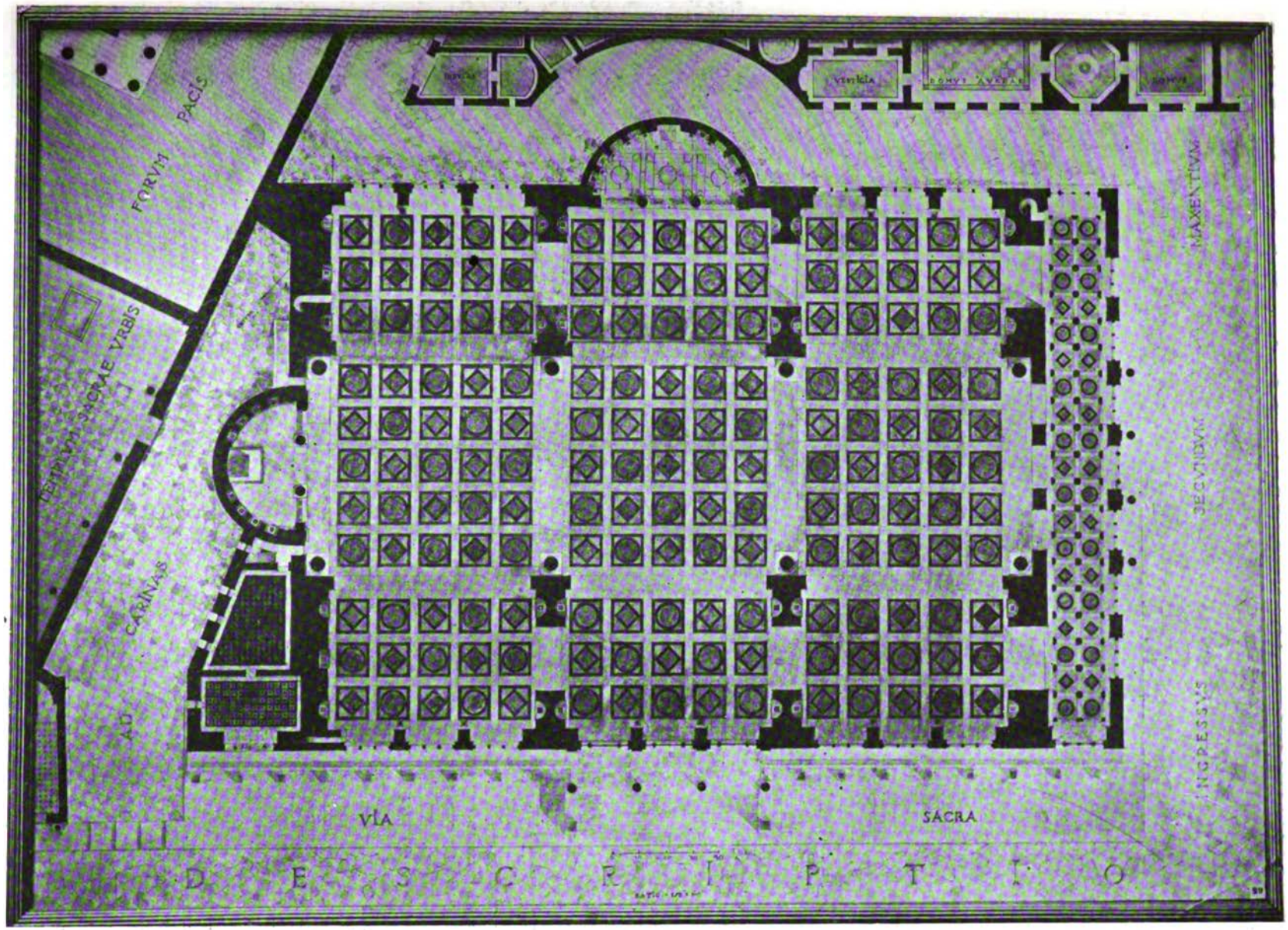


PLATE I.—GROUND PLAN. V. L. S. HAFNER

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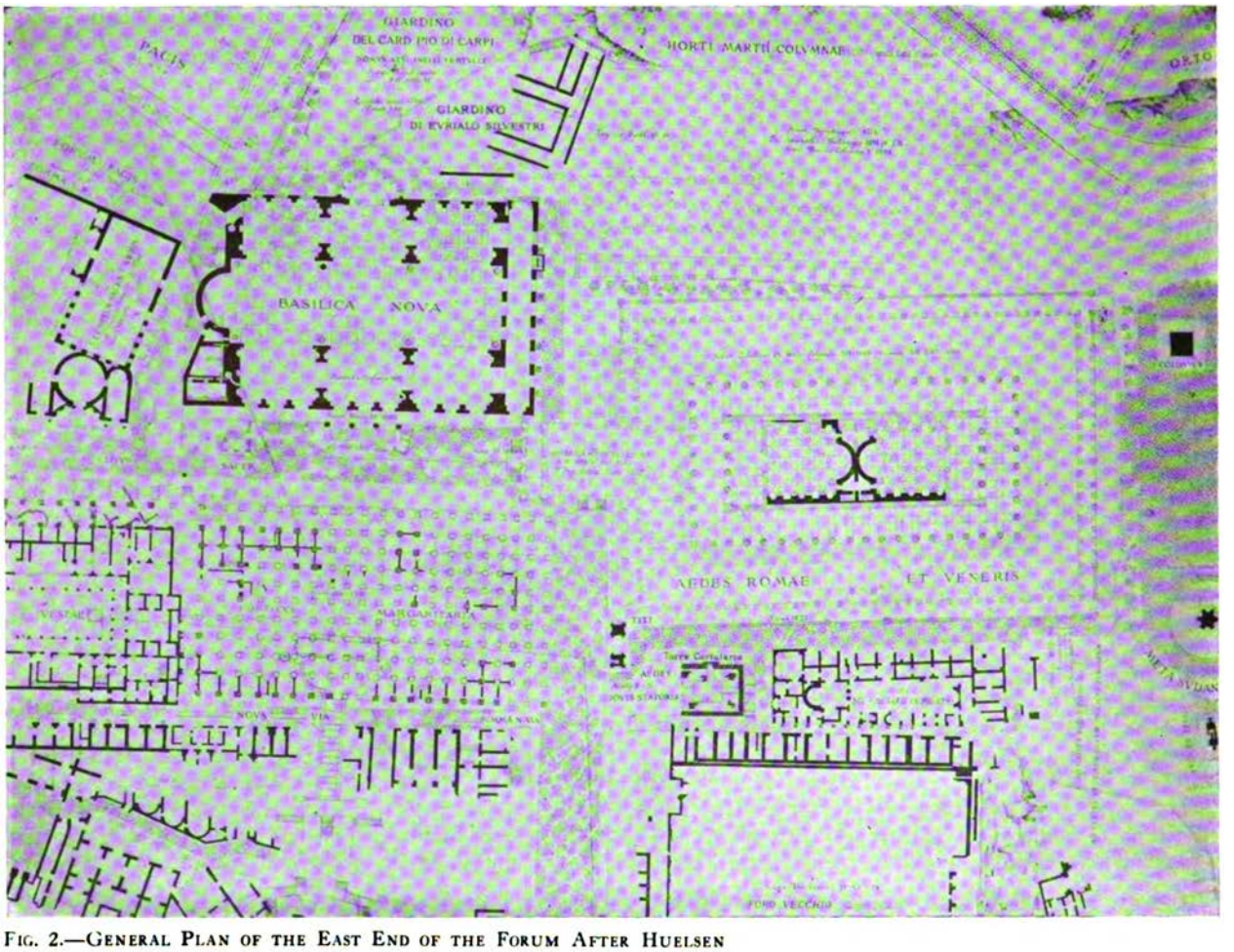


FIG. 2.—GENERAL PLAN OF THE EAST END OF THE FORUM AFTER HUELSEN

from a narthex which extended across the east end opposite the temple of Venus and Rome. The nave, which terminated in an apse fifty-seven feet in diameter, measured two hundred and eighty by eighty-one feet nine inches, wall to wall, with a height of one hundred and twenty-six feet. The aisles were fifty-two feet wide and seventy-nine feet high. The narthex, twenty-three and a half feet deep, was thirty-six feet high. The entire building covered a surface of about one and one-fifth acres, or about twice the area of the central room of the Pennsylvania station in New York.

ELEVATION ON THE VIA SACRA

The south façade of the basilica, as conceived originally by the architect of Maxentius, contributed to form a monumental approach to the temple of Venus and Rome. The retaining wall of the narrow terrace at the south of the basilica is nearly on a line with the north wall of the cella of the temple[6] which was rebuilt according to its earlier foundations. The substructures of the basilica followed the lines of pre-existing walls.[7] The Maxentian level of the Via Sacra was probably not much higher than that of the road which existed just before the fire of 307 A.D. It was undoubtedly widened and repaved by Maxentius. This pavement was discovered in 1882.[8] (Figure 3.)

The stones were worn as if from long use and showed signs of lack of repair. They were removed in 1901[9] to show the earlier line of the Via Sacra which is the road now visible. It dates from the first century B.C. The sides of the road were lined with dedicatory statues, pedestals of which were found in the course of excavations.[10] Probably a much greater number were converted into lime or used in buildings in later periods. The Via Sacra widened into an open space in front of the temple of Venus and Rome, where part of the pavement is still *in situ* in front of the church of Santa Francesca Romana. As the road ascended, it left uncovered a triangular portion of the face of the substructure of the basilica. Probably this was covered with stucco, as

[6] See the Engineer's plan of the Forum and adjoining areas, Section 6.

[7] The pre-Maxentian structures along the Via Sacra have been studied in detail by Dr. E. B. Van Deman. The results of her work will be published in the near future. I wish to acknowledge Dr. Van Deman's help in my study of brick-construction.

[8] Not. Scavi, 1882, p. 216.

[9] Huelsen, R. F., p. 227.

[10] Corpus of Latin Inscriptions VI, 1653, 1663, 1696. Not. Scavi, 1882, p. 219f. Some of the structures mentioned here had probably disappeared by the time of Maxentius.

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FIGURE 3.—MAXENTIAN PAVEMENT OF THE VIA SACRA. KINDNESS OF SENATOR LANCIANI

there are no traces in the facing of holes for clamps which would have been required had a veneer of marble been used.

THE TERRACE ALONG THE VIA SACRA

The substructure projected beyond the wall of the basilica for its entire length forming a terrace 7 feet 4 inches wide. Then in the course of construction or soon after, the portion along the central bay, a distance of 66 feet, was widened to 16 feet 4 inches. The absence of bonding at the sides of this projection is apparent. The floor level here is about 6 inches below that of the rest of the platform, as is shown by a step in the layer of tiles which are still *in situ* to a great extent. The terrace could be reached directly at the east, from the square in front of the temple of Venus and Rome.

The end wall of the narthex at the east was balanced at the west by the slightly longer wall of a room adjoining the central hall, formed on the substructures of earlier buildings. This room concealed the lower part of the apse from the Via Sacra. The south façade, with the exception of the extreme ends, rose to a height of 79 feet above the terrace. It was pierced by two tiers of arched windows arranged in groups of three corresponding to the three bays into which the aisle was divided within, except in the center of the lower tier where three doors opening on the terrace took the place of the windows in the side bays. The three main divisions of the façade were carried out above the sloping roof of the aisle by buttresses. These received the side thrust of the three groined vaults which roofed the nave. The clerestory was 47 feet higher than the aisles and admitted light to the interior through three huge lunette windows at each side and one at either end. Each of the aforesaid buttresses is pierced with an arch to lighten the mass and to afford a means of circulation on the roof. Have we here the prototype of the flying buttress? (Figure 4.)

ROOF

The roof was covered with clay tiles, marks of which are visible in the concrete of the fallen portions of the vault. It has been stated[11] that bronze tiles were used as covering. This opinion is derived from a statement in the *Liber Pontificalis*[12] that Pope Honorius took the bronze tiles from the temple of Rome to use for the roof of old St. Peter's. The building mentioned is identified with the basilica; for it is argued that the roof of the temple of Venus and Rome would not have furnished a sufficient number of tiles. Yet there would have been enough if the colonnade which enclosed the temple area were roofed in the same manner. Besides, the wooden beams of the saddle roof of this temple would be more likely to require as protection from the weather a light

[11] Duchesne, Melanges, 1886, pp. 25-27.
[12] Lib. Pont., Vita Honorii, § 119, III.

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metal covering, which would be entirely superfluous in the case of a solid concrete vault. Moreover, the measurements of the prints[13] of the tiles in the vault show variants in dimensions incompatible with the care which would have been taken in laying tiles of more expensive material.

The cornice of the roof was formed of travertine brackets, supporting tiles which were covered with mouldings run in stucco. Remains of this cornice are still visible at the east end of the building. Travertine water spouts were embedded in the cornices at the north and south to throw the rain away from the walls. Several of these are now lying on the roof of the north aisle.

Wall Decoration of Outside

The outside of the building was stuccoed in imitation of finished ashlar, part of which was seen on the east face by Nibby, one of the early archæologists.[14] A portion of one rectangle still clings to the fragment of the corner of the building which lies in the forum of Peace. An engraving of Rosini shows how the east face appeared a century ago. The combination of this decoration with a stucco cornice on a tile foundation is also still visible in the nearly contemporary senate house of Diocletian. Renaissance drawings show that this decoration was also employed in the baths which the same emperor constructed.[15] A second cornice of tile and stucco ran above the lower line of windows at the height of the cornice of the single story narthex[16] at the east. It probably joined the cornice of the marble entablature supported by the four porphyry columns which formed a portico above the wide part of the terrace on the south, and extended at the west along the roof of the single story construction which adjoins. The small room at the southwest corner of the basilica, as appears from a careful examination of the bricks, had a single arched window which balanced the door in the end of the narthex at the east. The flat wall which now conceals this arch from the front is a later addition.

At the bottom of the outer wall, just above the terrace, ran a marble base, as is shown by traces of concrete bedding which adhere to the lower part of the wall. This base served the purpose of protecting the stucco from damage by dampness or blows. At the edge of the terrace there must have been a balustrade, perhaps similar to that which stood at the foot of the steps leading to the temple of Venus and Rome, where the groove on which it rested is still discernible in the travertine pavement below the first step. The terrace was paved with marble for which there are traces of bedding on the levelling layer of roof tiles which are still in place to a great extent. The original level was later raised in front of the central bay by a layer of concrete composed largely of marble fragments, some of which are pieces of fluted pilasters. The original pavement was probably relaid at a higher level in this section of the terrace.

[13] The length is about 40 cm. (16 inches), the width varies from 25-35 cm. (10 to 14 inches) between the portions which overlapped.
[14] Roma Antica II, pp. 238-49.
[15] Rivoira, Arch. Rom., p. 243; Lanciani, R. & E., p. 44; Atti del Lincei, 1883, Plate III; Du Perac, Plate 2, 26, 30.
[16] Not. Scavi, 1879, p. 264; Mélanges, 1891, p. 164.



FIGURE 4.—PHOTOGRAPH OF BUTTRESS

Central Portico

The portico at the center of the terrace was principally a decorative element, although the doors would serve to facilitate the entrance of large crowds and prevent congestion in the narthex. Across the front of the portico were four red porphyry columns with very wide intercolumniations. The axial unit is 17 feet. Architrave blocks of such dimensions were rarely used. The central architrave blocks of the Propylæa at Athens were 17 feet in length.[17] The century preceding Constantine was a period of gigantic structures such, for example, as the temple of Baalbek, the longest architrave blocks of which are ascertained to have measured 17 feet 11 inches.[18]

The capitals of the columns were probably of white marble.[20] Porphyry columns are used with white marble capitals in the Lateran baptistry. The latter were contracted for by Constantine under Pope Silvester but not set up until the time of Pope Xystus (432-440) according to the *Liber Pontificalis*. We have placed a statue above the cornice over each column. Behind the columns, between the windows, were probably pilasters, as there are places for the plinths, which were later removed, in the concrete poured over the original level of the terrace. That this porch was part of the original design is shown by what remains; for the foundations of the columns, torn away by the weight of the falling columns when the building collapsed, or hacked out in the Middle Ages, were embedded in the concrete mass of the substructures.[21] If the columns had been added later, it would not have been necessary to sink foundations in already existing concrete, as the weight which the columns supported was comparatively slight. The holes, left by the removal of the blocks of travertine which formed the original column-foundations, were filled in when the fragments of the columns were set up by the modern restorers.

Windows

The windows were fitted with travertine sills. Some

[17] Praktika Athens Archæological Society, 1909, p. 115.
[18] Schulz und Winnefeld, Baalbek, I p. 66.
[20] Portions of the porphyry shafts were found in 1487, 1819, and 1878; see Not. Scav., 1878, p. 139. The top of the column set up at the west corner of the terrace has a vertical segment cut from it. This might suggest that it was used as a three-quarter engaged column against the wall. Clamp, dowel, and pour channels, however, visible on the upper surface, point to the fact that the column had been broken and restored by clamping on the portion to complete the drum.
[21] Fea. Bas. Const., p. 14, mentions these parts. One is at the right of the core of the steps.

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of these were found in the debris and replaced in modern times in the windows made by partially filling in the doors of the central bay. The sills show sockets for the mullions which divided the windows vertically into three equal parts. The outer edges of the window screens were embedded in grooves which can be traced in the brick facing at the sides of the window openings at the east of the south façade. Here also occur at regular intervals the sockets into which the muntins were fitted. This shows that the screens were of heavy material, bronze or marble, which required a firm attachment.[22] In our restoration we have used bronze screens in harmony with the bronze doors, varying the tracery in the panels of each. The large size of the windows led us to adopt this variation rather than a uniform pattern. Varied tracery was used in the screens of the church of Santa Sabina, but these date from the eighth or ninth century and furnish no definite evidence for earlier buildings.[23] In a building of such magnificence we should suppose that the windows were glazed, although an unclosed public building would not have been impossible in ancient Rome, the inhabitants of which were accustomed to endure a greater degree of cold than we generally suppose, holding court out of doors throughout the year and living in unheated and open houses. Glass was used to some extent in windows as early as the time of Caligula in the first century.[24] Fragments of sheets of glass have been found in excavations both in Italy and in Roman provinces of more northern countries. The glass is thicker than the modern product and of a greenish hue. The largest of the plates found measures only 15 inches in width, but, set in the elaborate window screens, these dimensions would have sufficed. The excessive cost of the amount of glass required for the basilica of Constantine makes its use seem unlikely. Probably one of the substitutes, such as selenite or thin plates of marble, which were known to the Romans, was used in this case. Selenite, a metamorphic form of calcium carbonate, was used in the ninth century re-building of the church of Santa Sabina, referred to above. The same material has been employed again by the modern restorers; in this instance the amount of selenite quarried near Ravenna cost 12 lire for each window; a corresponding amount of glass would have cost 900 lire.

The Doors

The doors of the building were in all probability of bronze similar to those still in place in the so-called temple of Romulus, which is contemporary with the basilica. Of about the same period are the portals of the Lateran, which were taken from the senate house of Diocletian by Pope Alexander VII. In our restoration we have used, in the lunettes of the clerestory, screens painted to harmonize with the wall decoration of the interior. These screens were probably made of wood covered with stucco; in buildings of moderate size they are sometimes made of marble.

[22] The frames of the windows of the Villa of Sette Bassi were probably of wood fastened with clamps, and so there are no visible sockets for supports.

[23] Muñoz, La Basilica di Santa Sabina, pp. 29-30.

[24] Kisa, Das Glas in Altertum, p. 362.

Changes in the Facade Under Constantine

We are informed that after the overthrow of Maxentius the senate dedicated to Constantine the buildings which the former had erected,[25] namely the *Fanum Urbis* and the basilica. (The former has recently been identified as the building connected with the so-called round temple of Romulus.[26]) The use of the pluperfect tense of the verb *construxerat* in the passage referred to would seem to indicate that the basilica was completed or very nearly completed at the time. The inscription dedicating the round temple to Constantine was available in part in the sixteenth century when it was copied by Panvinius.[27] It seems probable that Constantine in taking over the basilica inaugurated the change in plan, which, as the construction shows, was very nearly contemporary with the main structure. Constantine made a new entrance from the Via Sacra and probably placed his inscription on the already existing portico.[28] A flight of steps was constructed against the front of the portico to the Via Sacra, making the terrace accessible from this street. The upward grade necessitated the use of ten full steps besides three at the left which extend only partly across the length of the flight.[29] The stairs were flanked on either side by a rectangular bastion. The coarse rubble core of the steps is simply built against the earlier brick facing of the terrace wall with no bonding. The steps and bastions were doubtless veneered with marble. We have crowned each bastion with a seated statue.

Previous Restorations of the Outside

Several authors[30] describe the outside of the basilica as decorated with one or more rows of engaged columns. They base these statements on a comparison with the remains of the basilica Julia and with the evidence afforded by a series of perspective plans of Rome dating in general from the fifteenth century. Since the structure of the basilica Julia differed organically from that of the building under discussion, its external decoration can afford no clue to the adornment of the latter.

Of the early plans of Rome,[31] all point to a common

[25] Aurel. Vict., Vita Const. 40.26.

[26] Whitehead, SS. Cosma e Damiano, Bull. Arch. Christ. XIX, 1913, p. 164.

[27] C. I. L. VI, 1147.

[28] Not. Scav. 1879, p. 313, reports the finding in the street between the basilica and the round temple of a marble fragment with four large letters which were originally inlaid with bronze. No dimensions are given. The letters are S T and beneath I O. As the S T fits the name of Constantine, this was identified by Senator Lanciani, who conducted the excavations, as part of the inscription of the basilica. I have endeavored to reconstruct it as follows. I O fits PIO only of Constantine's usual titles.

(a) IMP. CAES. FL. CON(ST)ANTINO
(b) FELICI. MAXIMO. P(IO). TRIUM
(c) PHATORI. SEMPER. AUGUSTO
S P Q R

(a) Inscription on arch of Constantine, CII VI, 1139.
(b) Unusual order, CII VI, 1140.
(c) CII VI, 1141, Caballus Constantini as quoted by the anonymous of Einsiedeln.

[29] The entrance of the basilica Julia is managed in the same way with seven steps at the east and only one at the west near the slope to the Capitoline.

[30] Middleton II, p. 228; Thédénat, p. 346.

[31] De Rossi, Piante Iconografiche di Roma antenore al secolo XVI 1879; four plans, supplemented by
1. Stevenson, Bull. Com. 1881, pgs. 74-105, Pl. III-IV, Di una Pianta di Roma dipinta da Taddeo di Bartoli (1413-'14);
2. Gnoli, ibid, 1885, pp. 63-76, Pl. IX-XV. Di alcune Piante Topografiche di Roma ignote o poco note;

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original, possibly dating from the thirteenth century. They represent, in the neighborhood of the Colosseum, three contiguous arches with single or double columns between them. In a Paris codex of 1447,[32] the name of Templum Paris, as it was then called, assures us of the identification of the structures. Yet such an arrangement of the façade is incompatible with the evidence of what remains; for it shows neither the portico of the south face nor the single story narthex at the east. The north side of the building, which faced a narrow street, would have shown the projecting apse. Moreover, from the orientation of the plans, it is the south face which is represented. We must conclude that these drawings show what remained of the basilica after the collapse of the nave and south aisle, namely, the three arches of the north aisle with the adjoining columns of the nave. Somewhat similar to this is the view of the ruin with two columns still standing, though only one has a capital, in Bramante's sketch made about the year 1500.[33] We know that by this time the pavement was entirely covered.

East Facade

According to the original plan, the principal entrance to the basilica was at the east from a street which ran north from the Via Sacra with a slight upward inclination. The narthex was only one story high, as the front wall above it shows no traces of the roof of a second story built against it. Entrance was gained through three doors; there was a door in each end of the narthex—the brick facing at the north shows that a doorway, not a window, occupied this space, and the same was probably true of the opposite end, although here the original facing at the bottom of the piers has been restored; in the front wall of the narthex there was a single door with three windows on each side. At later periods the two windows at the north were filled in and the others cut down to form entrances, as the facing shows. The same type of window screens and doors were probably employed at the east as at the north and south.

Decoration of Exterior of Narthex

Along the roof of the narthex we have restored a stucco cornice. The fragments of granite columns found in the debris, which are of the same dimensions as the porphyry columns of the south portico, probably indicate the architectural adornment of the east face. On the principle of symmetry, we have assumed that there were four of these columns because of the existence of the four porphyry columns of the south portico. The use of only four columns also served to continue the lines of the nave at the façade. We accordingly reconstructed the portico with one column at either side of the central door and one between the first and second windows on each side. We used capitals of white marble, as in the case of the gray granite columns of the early tomb church of Santa Costanza, and a marble entablature, broken and extending back from each column to a corresponding pilaster against the wall. This method, first used in the Forum of Nerva, appears also in the arch of Constantine, in columns which were added by that emperor to the earlier concrete core of the structure. Above each column we place a statue. Renaissance artists solve the problem of these columns in verious ways,[34] using one between each two windows, eight in all, or sometimes more slender columns in pairs.

Nibby disclaimed the use of columns in this part of the building because he found no traces of foundations when he excavated in front of the narthex.[35] The travertine blocks on which the columns rested, were probably removed in the middle ages, as were those of the south portico.

The east face of the building was stuccoed to represent finished ashlar.[36] Above the narthex the front wall of the nave was pierced by three arched windows. The side of the one at the right can be seen in the edge of existing section of the front wall. The triangular front of the clerestory had a single lunette window similar to those in the triangles at the sides of the groined vaults. This façade, with the single story narthex, three arched windows above it in the front wall of the buildings, and a gable end of the roof surmounting this, is similar to the scheme adopted for the early churches, and, in fact, is still to be seen in Santa Maria in Cosmedin and others.

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3. Visconti, ibid, pp. 77-82, Pl. XVI, Una Pianta di Roma del Secolo XIV pubblicata dal Sig. Muñoz;
4. Huelsen, Bull. Comm. 1892, pp. 38-47, Plates II-IV, Di Una Nuova Pianta Prospettica di Roma del Secolo XV.

[32] De Rossi, plate II, 2.
[33] Uffizi No. 1711.
[34] Vasari Giovane, Uffizi No. 4809—three doors in center, ten columns. Baldassare Peruzzi No. 437, 543 and Lorenzo Donati No. 200, used eight columns as did Caristie in his restoration made after the excavations of 1819.
[35] Loc. cit.
[36] See above, p. 10.

(*To be continued*)

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A Greek Statue from Rome

The statue illustrated on page sixty-three of this issue was found in 1915 on the Palatine hill at Rome by Commendatore Boni, during the course of a clearance excavation. It is of Greek marble, about half the scale of a full-size human figure. It was called by its finder a figure of Victory and was, by him, held symbolic of the coming Allied victory. Pictures of it appeared in some of the Italian illustrated journals, but little news of it reached outside and it has not yet been published. It now lies inside the villa of Commendatore Boni on the Palatine. A cast of it has been erected in the Pergola of the beautiful garden that flanks the villa and overhangs the Forum.

The statue does not represent a Victory but rather a nymph or water-Nereid moving rapidly to the right. It is cut with the utmost delicacy and is a work of Greek sculpture of the greatest beauty and importance of the end of the fifth or beginning of the fourth century B.C. The grace of the moving figure and the lightness of the drapery at once suggest comparisons with the sculptured balustrade of the little temple of Wingless Victory at Athens. The drapery shows the same lightness of touch and the same easy folds. The garment worn is the Attic peplos girt on both shoulders and with a fold of drapery, called technically an "overfall," that covers the breast with a double thickness, but hangs free and is not girt in at the waist, as is usually the case with garments worn by the Victories of the Athenian temple. In general style and build the figure resembles, perhaps more closely, the statues of Nereids on the so-called Nereid Monument from Lycia, the sculptures of which are now in the British Museum. The new statue, therefore, has a great interest for students of sculpture. The Nereid Monument itself may, perhaps, belong to the fifth century. Comparisons are even possible with the figures of the pedimental sculptures of the Parthenon itself, though these are admittedly earlier in date than the Palatine statue; nevertheless, the artist of the new sculpture was not ignorant of the best technique of the fifth century and had clearly studied such figures as the Iris of the Parthenon pediment or the Victory of Pæonios at Olympia.

How the statue had reached Rome is a mystery, but so many fine Greek works of art were taken by Roman officials and Emperors from Greece that there is nothing startling about such a discovery. One has only to cite such masterpieces as the Ludovisi throne or the Venus of Capua to realize that Greek art had paid its full tribute to the connoisseurs of Rome. From as early as the sack of Corinth in 146 B.C., Greek statues had been imported steadily into Rome and other towns of Italy: Sulla, Tiberius and Nero each transferred vast numbers of Greek statues to Italy. Many reached the Roman cities from the Greek cities of Italy, such as Tarentum, whether as the booty of conquerors or through the market.

This small but exquisite work of art must have reached Rome in some such way and have been one of the numerous works of art in the imperial palaces on the Palatine. More precise information as to its origin can hardly be expected. Its chief importance lies, perhaps, in the fact that it belongs to a very rare type of statue. Figures of half the natural scale, and cut in the round rather than in relief, are by no means common, either in Greek museums or in those of Italy. This figure is so cut that it can be seen from any side, though the front view is the most beautiful and clearly that from which the artist expected it to be seen. Probably it was, like the Victory of Samothrace, on the summit of a monument, perhaps a pedestal or pillar.

S. C.

On Certain Differences Between "More" and "Better"

Some ten or twelve organizations (with names giving assurance of the importance of their participation) collaborated with the National Housing Association in a conference held in Philadelphia on 5, 6, and 7 December, 1923.

The layman or technician who attended this conference could not but be impressed by the variety of opinion which was both promised by the program and expressed by the speakers. It should be recognized at once that the National Housing Association is not a technical society. Its meetings, therefore, must include much talk, and considerable emotional inspiration. The real way to estimate the value of such a meeting is to read the newspaper stories appearing at the moment, to read the printed "Proceedings" which are issued afterward, and to consider that the meeting is a periodical one, continuing a portion of the public thought (!) over calendar periods.

One of the sessions was devoted to zoning. As we have already implied, technical discussion occupied little time. There was no analytical consideration of the "area regulations" of zoning ordinances and their bearing upon housing. The discussion was largely general, the arguments, the familiar ones, obviously energized to coerce the reluctant spirit of unzoned Philadelphia. Judgments were given upon the wisdom or success of zoning by those who had had more or less contact with the machinery of its operation. The dominant note appeared

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to be "approval, with qualifications." This in itself is always a matter of interest to those who would focus their minds upon public opinion. Incidentally, and apropos of one of the excellently presented and interesting papers, we were forced to acknowledge the æsthetic stimulus of speculating upon the modeling of the upper portions of tall buildings—say from the tenth to the fiftieth story. Visualized, this speculation even partakes of the dramatic. We like this sort of stuff. It's bully! But, God bless you, it is but a trivial phase of zoning after all. What about the occupants of the first ten stories? And why waste time on this when there are more vital aspects of zoning (the area regulations, for example) which should receive searching and critical re-examination? However, this was not a technical gathering, and one should not expect too much from a revival meeting. And anyway, there is a suspicion that Philadelphia will in due course get up on the mourner's bench (band-wagon) and be saved.

In passing, one must mention the regulation "round table luncheons" wherein each one tells every one else collectively and publicly the same things he has already told them individually just outside the convention room door during the reading of papers.

But to return to the main tent. One might best summarize the heterogeneity of opinion by noting that neither individually nor collectively was there a thought of a synthetic exposition of the housing problem or of a program for its solution. If we assume that the housing problem is caused by the operation of two divergent forces we can find the theses of most of the speakers more readily understandable. Since the element of cost (of land, of money, of materials and of labor), together with the element of profit inherent in all business transactions, pull in one direction, and since the personal and social needs of human beings express a pull in the opposite direction, we can see the temptation for the concrete human mind to devote itself to balancing the strain of the two forces. (In the meantime this process becomes the more exciting and intriguing by reason of the variable purchasing power of the dollar.) But more often the effort is made to reduce the pull of the human demands and to cite insuperable obstacles to reducing the cost and profit demands. In the present meeting the emphasis appeared to be upon the human concessions which might result in cost reduction, the cost saving being the thing desired. Most interesting researches looking to efficiency were reported, but the details are too lengthy to be here reviewed. The speakers variously called for the encouragement of thrift, for proper utilization of the potential and actual resources of savings banks and building and loan associations. Eradication of seasonable unemployment was indicated as promising savings in construction cost as well as increasing the purchasing power of the worker. Others would throw open additional reservoirs of credit, such as postal savings. Reducing the cost of building by reducing the cost of labor was not forgotten. With one or two marked exceptions the observer of the meetings felt that "ingenuity" was the *ne plus ultra*. There was no come-back when some one implied that, after credit had been extended to the limit, there might remain still unsolved the basic difficulties of the housing problem.

One may quite fairly and frankly express disappointment at the lack of evidence of a *growing* body of analytical and constructive thought applied, first,—to the understanding of the economic and social forces which underlie the housing problem and, second,—to devising and promoting not a revolutionary millenium but a long-term evolutionary program definitely oriented toward a specific goal. We should like to think that there are increasing numbers of citizens who will conceive the whole housing problem and its solution as a synthesis. But observation of this meeting, where one would naturally expect to find something much superior to newspaper reporting disguised as editorials, or superior to legislative discussions, is like a cold shower. We bump our own concrete head against the velvet wall and realize that up to date society stumbles along, patches up here and there, and ever and anon is either expedient or dodges the issue completely. This is life, at present, and as *the present* is that which enchains, bewilders, and drugs us, few care to listen to voices from the past. But in his very wonderful essay on "Government by Talk,"[1] Mr. Jacks begins by drawing a parallel between the address of Mr. Lloyd George on the occasion of his induction to the Rectorship of Edinburgh University in 1923, and the address of Thomas Carlyle, on a similar induction to the same office in 1866.

Said Mr. Lloyd George: "Judging from the specimens I have seen, great doers are also great talkers. Some of the greatest business men I have ever met talk like the Gulf Stream. The strong, silent man may have roamed the earth in prehistoric days, but . . . I feel sure he must now be as extinct as the mastodon. But with politicians speaking is an essential part of their business. . . . Parliamentary government means etymologically as well as in reality government by talk . . . In a free government you must talk your way to good government, for there are so many to persuade. . . . A programme is successful when a truth becomes a tag. That is the result of talk. It is the only method ever known of running a free government. . . . The men, therefore, who despise talk themselves talk nonsense, and mischievous nonsense at that."

Said Carlyle: "Oh, it is a dismal chapter, all that, if one went into it—what has been done by rushing after fine speech. . . . There is a very great necessity indeed of getting a little more silent than we are. It seems to me as if the finest nations in the world—the English and the American in chief—were going all off into wind and tongue. But it will appear sufficiently tragical by and by, long after I am away out of it. There is a time to speak and a time to be silent. Silence withal is the eternal duty of a man. . . . Why tell me that a man is a fine speaker if it is not the truth he is speaking? . . . If a 'good speaker,' never so eloquent, does not see into the fact, and is not speaking the truth of that, but the untruth and the mistake of that—is there a more tragic kind of object in creation? Of such speech I hear all manner of people say, 'How excellent!' Well, really, it is

[1] *The Hibbert Journal*, October, 1923.

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not the speech but the thing spoken that I am anxious about. I really care very little how the man said it, provided I understand him, and if it be true. Excellent speaker? But what if he is telling me things contrary to the fact? . . . An excellent speaker of that kind is, as it were, saying, 'Ho, everyone that wants to be persuaded of the thing that is not true, here is the man for you!' I recommend you to be very chary of that kind of speech."

And Mr. Jacks continues: "If there is any tag in existence which deserves to be called the 'winning tag,' we surely have it in 'improved conditions'—better houses, better food, better clothes, and so on through the familiar list. Now, 'getting down to cases,' as Mr. Babbitt urges us, or 'letting our consciousness play freely round the facts,' as Matthew Arnold has it, or 'looking into origins and issues,' as Carlyle would say, is it not obvious that these 'better conditions' mean ultimately nothing less than better *things,* better goods, better articles, better services? Not one of which can come into existence except through the determination, on the part of those who create them, to *make* them better. Is it not obvious that we can never talk, legislate, or police these *things* into being? . . . If we are to have a better house, somebody will have to be a better builder . . . What, then, is the outlook if, along with the portentous increases in the 'bills' that promise us these better things, there be a decrease in the better builders . . . ? What if fifty million of them are being underfed, and twelve million have just been slaughtered, and in one country alone two million are out of work. The outlook is that we shall be disappointed as continually we are. We cry out for more houses, for example, and presently more houses, though not enough of them, begin to appear. But many of them are jerry-built, and made of shoddy material, and will be slums in another thirty years, the whole procured at an enormous cost, which falls ultimately on the very people whose conditions we are trying to improve. Meanwhile, where are the better builders? They are not forthcoming and all we can think of, to take their place, is a better 'bill'! 'No, my long-eared friends' —Mr. Jacks here imagines Carlyle to be speaking— 'improved conditions are not to be had in that way— enchanted multitude that you are! That way lies the road to the bottomless pit.'

"It is one of the marks of a civilization whose faith has drifted in one direction and whose works in another, till culture and labor have lost their natural relationship, that 'more' and 'better' are taken to mean the same thing. By this fatal confusion the 'better' is ruined, the 'more' gradually converted into the 'worse,' like a depreciated currency, and we draw nearer to the bottomless pit, escorted by 'bills.' . . . .

"By way of summing up we invite the critical reader to ponder the following connected propositions, and to accept or reject them according to his experience and judgment.

"1. That the present march of events is being determined, in the main, not by what anybody is *saying,* either in religious, ethical or political language, but by *the momentum of deeply rooted habits,* of which the acquisitive habit, with its attendant, the war-making habit (greatly strengthened by the recent war), is the chief.

"2. That, in spite of the ever-growing importance attached by civilized nations to political operations, the collective fortunes of civilization were never less under the control of political operators, less governed by them, nor drifting more darkly to unknown issues.

"3. That the currents of the world's history have so multiplied in number, increased in complexity, and grown in volume and violence that statesmanship, even the most powerful, is completely outwitted in the effort to bring them under any kind of unitary control; and that, far from governing them by talk, it is not governing them at all.

"4. That the majority of mankind, especially in democratic nations, are unaware of these things; and that, in consequence, they continue to expect from their governments a degree of security and tranquillity which no government can possibly give them in such an imbroglio; continually changing their government for that purpose and always being disappointed.

"5. That one of the chief causes responsible for this blindness is the habit, which all writers and orators have a vested interest in maintaining, of attaching more importance to what is *said* by speaking persons than to what is *done* by working persons; the belief, namely, that by a sufficient incantation of religious, ethical, and political phraseology, civilization will ultimately be diverted from acquisitiveness and war-making and led into better ways.

"6. That the bad custom has become established of testing the value of ideas—religious, ethical, and political —by the degree in which they lend themselves to oratory, and by the amount of eloquent argumentation they prompt, and produce; while the good custom has declined of testing the ideas by the excellence of the workmanship to which they lead on, in spheres of activity other than those dependent upon the tongue.

"7. That in science, where the interests of the orator are least in the ascendant, the standard of truth is higher than in other spheres where eloquence is cultivated and talk made much of; and that science, in consequence, as judged by its 'work,' is just now making a better record than either religion, philosophy, or politics.

"8. That the step from Truth to Beauty, which was almost instantaneous with the Greeks, is being rendered increasingly difficult to the modern world by the bad social habit aforesaid of honoring fine speech in public above good workmanship in private.

"9. That the renascence of poetry and the other arts, as well as of good government, is likelier to arise from the less vociferous of man's pursuits than from the more.

"10. That our actual state is not that of being *governed* but rather that of being *hypnotized* by talk; and that this is what Carlyle had in mind when he described his age as 'enchanted.'"

Now let us add to this the finest of sayings by Louis H. Sullivan in that marvelous *Autobiography* for which we have to thank THE JOURNAL:

"The great creative art of upbuilding a chosen and stable civilization with its unique culture, implies orderly concentration and organization of man's powers toward this sole end, consciously applied in each and every one of his socially constructive activities in the clear light of his understanding that the actualities of good and

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evil are resident in man's choice—and not elsewhere. Thus will arise a new Morale in its might.

"And let it be well understood that such creative energy cannot arise from a welter of pallid abstractions, nor can it thrive within the tyranny of any cut and dried system of economics or politics. It must and will arise out of the heart, to be nurtured in common honesty by the intelligence, *and by that sense of artistry which does not interfere with the growth of a living thing* but encourages it to seek and find its own befitting form. Thus the living idea of man, the free spirit, master of his powers, shall find its form-image in a civilization which shall set forth the highest craftsmanship, the artistry of living joyously in stable equilibrium."

All housing problems will vanish when this one is recognized, and never until it is. FRANCIS SMALL.

Housing and Community Planning

CLARENCE S. STEIN, *Associate Editor*

The New York Puzzle

In 1919 New York City reawakened to the housing problem. Rents began to skyrocket. Landlords no longer bargained. Though the roof leaked, the plaster fell, the plumbing balked, the fire escape rusted, the public halls grew filthy, landlords refused repairs. They had the whip hand. The tenant could take it or leave it. There was nowhere better to move. Families were forced downward. They had no alternative, and so they sullenly slid back into the older, dirtier, darker, more disreputable tenements. All over the city they took boarders. They doubled up with one another.

In 1916 with a normal vacancy of apartments of 5%, a tenant could bargain. The landlord took an interest in his welfare. But with the vacancy figures at 36 hundredths of a per cent in 1920, the alternative was to accept what was offered or move into the street.

It was apparent that the far-famed law of supply and demand—even for the lucky half of the population not habitually dwelling in the slums—was not working. The state stepped in. It declared an emergency. The legislature passed laws to protect the tenants who were unable to protect themselves. The laws were simple. They prevented the eviction of tenants except in a few unusual cases and limited the landlord to the exaction of a reasonable rent. When landlord and tenant cannot now agree, the courts fix the rent to be paid.

The legislature also permitted tax exemption for new dwellings with the idea of accelerating house construction.

Some four years have passed. Houses and apartments have been built, particularly during the last two years, in vast numbers, and yet conditions have not improved. The New York State Commission of Housing and Regional Planning, after a careful investigation and numerous public hearings, reported to the Governor and the legislature on the first of the present year, as follows:

"In New York City the housing emergency still exists. In spite of the large number of dwellings constructed during the past two years, tenants are in no better position today than they were in 1920 to bargain with landlords. Rents have risen continuously, and congestion has increased. Families are being forced into poorer and smaller quarters. They are obliged to double up, two families living in rooms which under normal conditions would be occupied by one family; they are increasingly forced to take in lodgers. The dilapidated, insanitary old houses which were considered uninhabitable in 1920 are now fully occupied and over-crowded. The condition of upkeep and repair has grown steadily worse. If the emergency rent laws were needed in 1920 they are even more necessary at the present time."

The Commission also says: "While it is perfectly apparent that the rent laws must be continued for the protection of tenants, particularly tenants in the lower income groups, it is equally apparent that the rent laws will not serve to bring the housing emergency to an end."

The Commission is not blind to the fact that the housing dilemma that has so aroused New York and the rest of the world is not a phenomenon, distinct and separate from conditions characteristic of a so-called normal period. The housing problem that we have all talked so much about since 1919 was not caused—it was merely accentuated—by the war. Its roots go deep into the past. Here—as in Europe—we have had our housing problem ever since the beginning of the industrial age. It is true that in the days before men crowded to the cities to mind the machines, dwellings were often but poor shacks of one or two rooms, without gas, electricity, running water or any of the facilities of the modern bathroom. But those dwellings stood in the open and the free air and sunshine performed their eternal functions of purification. Danger from fire was slight and was a danger to the individual alone and not to a whole community. And so we say that the housing problem began with the industrial revolution—so-called—and that it has grown with the growth of our cities. The standard that the public has required for its own protection has gradually risen. The ability of the individual to pay for that standard has diminished. Thus there has steadily grown up this divergence—this ominous parting of the ways—between the standard of house set by the community—the adequate house—and the inadequate incomes of those that cannot dwell in that house.

Ah! there is the definition of the housing problem—how to make inadequate incomes pay for adequate houses. It sounds more like a puzzle than a problem. But this is what the public of New York is demanding. They are outraged by conditions. They can no longer afford to live decently in an adequate house. They are forced to put up with worn-out quarters far below the standard fixed by law for new construction and sanctioned by the community as minimum standards. Normally this

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is true of almost half the population of New York City.

When, on account of the war, the supply of houses fell so far behind the demand that a much larger part of the population was involved in the housing problem—as the poor always have been involved—they, too, suffered from the growing discrepancy between incomes and the cost of houses. The poor has become accustomed to its lot. They have borne it in silence. It was when the articulate classes felt the pinch and found their incomes inadequate for their idea of adequate houses that the volume of complaint rose far above a murmur. It became a howl.

The impossibility of most New Yorkers to pay for a decent home is brought out clearly by the studies of the Commission. Its analysis of incomes in New York State and City shows that of the million and a quarter families in the city, not quite a fourth have between $2,500 and $5,000 a year, and less than a tenth have above $5,000. The average income for the rest of the state is even lower. In fact, only one-quarter of the families within the state have more than $2,500 a year. These, be it remembered, are the incomes of the family, including what is turned in by all the members of it!

Here, then, are the inadequate incomes. What kind of a home can be bought or rented by the vast two-thirds below the $2,500 line? Adequate home! Let us roughly set a standard at least as to number of rooms. An average family, the statisticians say, consists of 4.4 members. Let us get rid of the fractional member and we have 4. There should be at least one common room —even though it be no more than a cramped kitchen— and a bedroom for the parents—and one for each of the children if they be boy and girl. Four rooms! That seems a minimum of decency, does it not?

What does it cost to rent a new four-room apartment? In Manhattan or the Bronx they have built vast quantities of new apartments during the past two years. Most of them are renting for $20 or more a room per month—$80 for a four-room apartment. Now they say that a man spends "one week's wage for one month's rental." This refers to the earnings of the main support, the chief prop, and not to the family income, which was found to be, on the average, one-fourth more than that of the chief earner. But past budget studies and the studies of some 4,000 families made during the last few months by the Commission, show a great variation in the different income groups as between incomes and rentals. The lower groups spend a much larger part of their earnings—28% for those with incomes under $1,000—and only 15% for those above $2,500. All above the $2,000 line spend less than one-fifth of their incomes for rent—and this is checked by other similar studies— so it is safe to say that 20% of income is the possible expenditure for rent.

Let us then return to the 4-room, $80 a month, $960 a year apartment. That means a $4,000 income. One-fifth of the families in New York City can make it without skimping their budget for food, clothing, and some incidental reason for being alive. The rest will have to look elsewhere.

One really low-rental tenement was erected on the island of Manhattan during the last few years. It was built by the Phelps-Stokes Foundation on a limited dividend basis, the rooms to rent at $9 a room, $36 a month for a cramped four-room apartment. It was built on what is called cheap land in Manhattan, but even so it was impossible to make it pay even the limited dividend. Announcement has been made that the rents will have to be raised about one-fourth in order to secure a 6% return on the equity. That means $45 a month, $540 a year. Still too much for two-thirds of the population!

In Queens there is the now famous Metropolitan apartment—the much heralded apartments—where at last we are really to have rooms for $9 a month. Little rooms—but at the low rental of $9. That means a 4-room apartment, with the additional dining alcove—calculated as a half a room—for just a little under $500 a year—$484 to be exact. Here is a chance for a few of the lucky two-thirds! Here those with the fat pay envelopes may squeeze themselves into four rooms. But there are comparatively few of these Metropolitan apartments and already there is a long waiting list.

But what of the thousands of new single family houses that have been built in Brooklyn and Queens? They are mostly priced at $8,000 or $9,000. Way out toward Long Island little rows of these ugly, shoddy, badly built wooden structures are rising and being sold as fast as they are constructed, with the land, for $4,750. They will cost much above the $500 a year that the $2,500 income man can afford to pay in interest, to say nothing of taxes, coal and upkeep. They now promise even cheaper houses—cheaper in every way—to cost $4,000. Even these will be beyond the means of all but the fortunate few in the vast two-thirds of New York's millions.

So this, at last, is the reason why all the vast construction of dwelling places seems to have been of so little help. Incomes are not enough. Which is why so large a part of the population is cramped in inadequate homes—inadequate in size—inadequate in every way. It just can't be done. An inadequate income will not pay for an adequate home.

Some of our hopeful reformers say that if we build enough $20 a room apartments, there will be an oversupply, and then they will be rented at less and so down the scale. Maybe that time will come—we have long been waiting for it. Maybe the time will come when reductions will work all the way down to meet the income scale of families in the littlest, dirtiest, darkest slums. Some of these families have been waiting half a century or so. Does any end to their waiting really seem in sight? With them now is also waiting a large majority of the families of New York—waiting for the famous old law to work its magic—a magic that has never yet worked anywhere.

CLARENCE S. STEIN.

From Our Book Shelf

In the Mirror Darkly

Mrs. Wood's last study of Housing[1] covers a much smaller field than her earlier work on "The Housing of the Unskilled Wage-earner"; for she confines her present

[1] Housing Progress in Western Europe. Edith Elmer Wood.

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study to Great Britain, France, Belgium, the Netherlands, and Italy; but her work has gained much in clarity of organization, and the present volume brings together, in acceptable form, a large mass of information which is now scattered under a dozen names, through the files of the architectural and housing journals. Mrs. Wood has visited the countries about which she writes, and her account of housing progress mingles the rubble of personal observation with a reinforcement of statistics. With each chapter goes a retrospect of housing legislation for the country under consideration, a discussion of the various agencies that have arisen to take care of difficulties in housing, and a survey of present activities.

With the general story, most students of housing are already familiar; it begins with the discovery of the slums in the middle of the nineteenth century, it follows the rise of philanthropic associations, building loan and construction societies, and such elaborations of private initiative as the garden city. Slowly it becomes apparent that the work of these associations is insufficient in scope and means; and step by step the state intervenes to establish housing regulations for all classes of building, and to make credit available at low rates for the housing of the workers. The details of housing activity in the various countries of Europe are infinitely diverse; but the general line of development is remarkably the same. It is not that one agent drops out and is supplanted by another; rather, each new enterprise, each new law, adds to the volume of housing effort—and still it proves insufficient, for private enterprise steadily finds domestic building unprofitable and drifts off into other fields. The war awakened many people to this situation, as it appears to have awakened Mrs. Wood, and at the end of the war England and the Netherlands passed housing laws which committed their governments to heavy subsidies. As a result, thousands of houses were built, hundreds of suburban extensions were made, and the standards of both the single houses and the whole community rose perceptibly above the old level of the jerry-builder and the by-law street; of these facts there is no doubt. Nor is there any doubt that to the extent that we have obsequiously waited for the private speculator to build houses which even a private philanthropist could not offer without a sacrifice of his inevitable six per cent, we in America have sunk further into the hole. While one may share Mrs. Wood's enthusiasm for foreign examples, and her impatience for America to catch up with the procession, one question will not efface itself from the mind: What prospect is there under the price system of ever catching up with the demand for decent housing? Government subsidies will relieve the shoe a little where it pinches, and for as long as the taxpayers do not discover that it is they who must pay the subsidy; or, as soon as the cry of active distress dies down, or as soon as some mossy pretext for inactivity presents itself, the subsidy is at once withdrawn, as we have seen it withdrawn in Great Britain. Is one not driven reluctantly to the conclusion that any effort to replace our obsolete and degraded domestic plant and equipment, on a scale broad enough to include the whole community, would also be on terms which would eliminate the price system and do away with land-monopoly? Plainly, the present economic system, on its own confession, cannot produce houses for the whole community at a profit. If this is true, the only task for those who see the housing problem as a whole is to ask: Under what system *can* houses be produced? Our present solutions are, it seems to me, all concerned to deny one staring, palpable fact.

L. M.

The Puzzle in England

Given the rather desperate situation which confronts England with respect to housing and a Liberal viewpoint and it follows that Mr. Barnes's volume[1] must be rated as an exceedingly neat piece of work. So far as the reviewer is aware, no other work on housing compares with it in point of what it offers as a source of information covering the intimately relevant facts. It contains a vast amount of data, unusually well classified and collated, bearing upon housing conditions in England since 1800. Much of this information is presented by graphs which reveal clearly the running relationship over the latter part of this period, in particular, of such significant items as the annual net increases in the number of houses, the course of wages, the cost of articles entering into the family budget, the interest return on consols, etc., etc. There are also many unusually interesting tables covering conditions in the building trade. The number of men engaged in the building industry by decades; the number of houses being built; the numbers engaged in various trades, and in building; the ratio of skilled and unskilled in the building trades; the output of houses per building trades workman at different periods. All this is presented with full notes and documentation. But lest one gain at the outset an impression that the author is solely concerned with statistical data it may be said that the bulk of it is placed in an appendix which occupies one-half of the 500 pages which make up the volume, which contains a short bibliography and an excellent index.

The title suggests the scope and the author's procedure. From the facts contained in the appendix the author traces the course of events from 1800 to date, drawing conclusions in the course of his argument which are brought to a head in the introduction. Of the century and a quarter, the author says:

"The housing shortage of today is not something that comes like a bolt from the blue, that like Melchizedek has no parentage, but is rather the slow accumulation of a century, suddenly and terribly increased by the conditions rising out of the war. . . . Looking back over it all it would appear that the conditions in the latter half-century were not dissimilar from those that obtained in the boom after the recent war. There was a great outburst of industrial and commercial activity playing a triple part, first attracting men from the building industry to other industries, then employing the greater portion of those left in the industry on the erection of industrial and commercial buildings, and lastly, forcing up the cost of building so as to make house building less and less possible as a speculation."

1 HOUSING, THE FACTS AND THE FUTURE, by Harry Barnes, Vice-President of the Royal Institute of British Architects; Fellow of the Surveyors' Institute; Member of the Society of Architects; Member of the Town Planning Institute; Honours Medallist in Building Construction; Chairman of the Housing Committee of the Independent Liberal Party in the House of Commons, 1918-1922, etc.

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Under the chapter, "The Surplus Family" (family not provided with its distinct group of rooms), we find a question and answer that must arrest attention.

"What has been the result of 110 years of housing? This: that the army of 320,000 families in 1801 has grown to an army of 860,000 families in 1911, and the persons involved from 1,500,000 in 1801 to 3,900,000 in 1911. Nearly 4,000,000 people without a home after a century of housing. Hardly less than the population of the administrative County of London, greater than the population of Glasgow, Liverpool, Manchester, and Cardiff put together."

Several chapters are given over to an exhaustive study of the decade 1911-1921 with a view of estimating the magnitude of the work ahead. The problem of "Empties and Replacements" is considered and we are brought abreast of the problem.

"We have to estimate how many houses we should build. We begin with the conclusion that we should replace 300,000 old houses. If we are not to add to the number of surplus families how many new dwellings must we provide? How many new families will there be? We start with a population in England and Wales of 37,885,242. This, at the marriage rate of 8 per cent, should give us 3,030,000 marriages, which, at the family rate of 32 per cent, would give us a net increase of 970,000 families, for whom 970,000 new dwellings will be required. With replacements this makes for England and Wales alone a total of 1,270,000 new dwellings required. To this must be added the needs of Scotland, and if we take these as being one-ninth of those in England and Wales we must add 140,000 dwellings to our number, making a total in all of over 1,400,000 dwellings required if this decade is to hold its own and make a beginning on the work of replacement.

"It may be said that we must postpone any real programme of replacements for another decade. It may be so, but if so, the work of the next decade will be cyclopean. Taking this view, however, we have in round figures still to build in Great Britain during this decade 1,000,000 new houses before we can recover an inch of ground on either pre-war or war arrears. Can we do this? That is the question that remains to be answered. But before we can answer it we must consider the extent and character of our building resources."

The resources of the building industry are critically examined, some startling facts are brought to light concerning the growing magnitude of repair and maintenance, the number of building trades workmen involved, the added number required to meet the demands of the present decade. All of which brings the author to the inevitable conclusion:

". . . that even if only accepting past standards, only maintaining as we maintained before, only accumulating dwelling houses and other premises at the average rate of the century that has gone, we shall require the addition of nearly 300,000 men to the building industry. . . . Can a decade which starts its career with 700,000 men complete a task which requires a million? There seems to be only one answer, and that an answer in the negative."

Under "The Augmentation of the Building Industry" is told what is being done to increase the number of apprentices. But the conclusion is not optimistic on this score. So also appear the various efforts to increase production by "dilution."

"So ended the efforts to augment the building industry by dilution so as to meet the emergency demand of the Housing Program. This two-fold record of the abortive efforts at apprenticeship and dilution goes far to show that the problem before those who desire to secure an adequate supply of skilled labor in the building industry in order to effectively cope with an adequate Housing Program is one the solution of which will be extremely difficult."

"Trusts and Rings" come under analysis in a chapter which concludes:

"It is obvious that a plentiful supply of cheap building material is not yet in sight, and that without it the danger of inflated costs arising in the prosecution of any vigorous building enterprise is very real."

Thus far the inquiry has been primarily concerned with an analysis of the material facts involved. It now turns aside to deal with the pecuniary facts and factors. "Actual Costs and Economic Rents," "Factors in Rents," "Earnings in Rent," "The Rent Restriction Acts." In these chapters the examination proceeds along the accustomed paths of non-evolutionary economic analysis. It is brought out clearly that

"It may be taken as absolutely certain that for a considerable percentage of the working-class families of this country private enterprise has never in the past provided new housing accommodations. . . . It may be asked, how then were they provided for? And the answer in the majority of cases, apart from agricultural laborers and miners, is either by the sub-division of existing dwellings, or through the deterioration of such dwellings having the effect of lowering their capital value, the lower rent required on the lower capital value bringing them within the rental power of the lower-waged working classes. . . . New houses they never had. Second, third, fourth, and fifth-hand houses they got, each class declining until they reached the rookery and the slum. One does not begin to understand the housing question until this fact is grasped. . . . Nowhere is there any indication of rising wages, everywhere the indication of a fall. The coolest and most dispassionate view leads to the irresistible conclusion that the percentage of families who are unable to pay an economic rent for the standard of housing demanded for them has increased from the estimate of 13 per cent before the war to at least 25 per cent at the present time. . . . There is, of course, an alternative to the provision of houses for those who cannot pay an economic rent, and that is the augmentation of their income to the extent necessary to enable them to do it. It may be that a minimum wage in all industries will at length be established of sufficient amount to provide the margin required for an economic rent, but such a possibility appears remote and its discussion would lead us far. Another proposal is for some kind of family endowment which would raise the 'family' income to the required level. This proposal whenever seriously pressed is bound to lead to wide controversy with the Trade Union movement, beside opening up a range of possibilities in social organization that is perhaps not fully realized by those who advocate it."

A chapter on "Private Enterprise" deals with the conditions which must obtain if the requisite number of

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houses are to be provided under the profit incentive. It is a fair examination; but again the author concludes:

"Can anyone survey the situation as it exists today and find in it any suggestion that private enterprise will be so stimulated in this decade as to undertake the repair of the decade that has gone, much less the wastage of the century before? The writer cannot find it, and so gets back to where he began—to the conclusion that, if this human need is to be satisfactorily met in the lower sections of society, public effort will have to make good the deficiency of private enterprise, not a temporary deficiency, but a continuing and it may be an increasing one."

The chapters which follow, dealing with "Land," "Material," "Labor" and "Finance," cannot be adequately covered in a review. So the author's conclusion as presented in the Introduction must serve to suggest the nature of the argument under these heads.

"The main conclusion is that housing of the working classes has now definitely passed into the same political category as that of their education, and of the provision made for them in old age, sickness and unemployment. As was the case in respect of all these last-named collective provisions for human need, the housing of the working classes is a task which that unregulated individual effort which is called 'private enterprise' has failed adequately to perform in the past, and cannot hope to even as inadequately perform in the future. . . . This conclusion is come to with hesitation and with reluctance, and was avoided till at last a full and dispassionate survey of the data available made it inevitable. The writer has no desire to narrow the field of private and widen that of State enterprise; the reverse is the fact. On the other hand, he cannot refuse to accept the proposition that if private enterprise is proved to have failed, to have made an adequate provision for legitimate human need, their satisfaction must be sought by publicly controlled and regulated effort. . . . The second conclusion is that without the most vigorous, organized, and continuous effort the housing position at the end of the present decade will be worse than it was in 1921. . . . The writer ends as he began, with the assertion that housing is a political question."

As was remarked at the outset, given the Liberal point of view, the author has done a neat piece of work. The Conservative may view such a handling of the facts as the casting of a straw, but he may grasp it. The Socialist may take comfort in the conclusions. But with respect to this the author says:

"To the Socialist it may be said that his rejoicing is premature, for the method least calculated to bring a society based on private enterprise to an end, is that method which removes ills that arise under it."

Although the author gathers his arguments into a firm conclusion, it is clear enough that in the course of his work he has been puzzled over the handling of the facts which stand so securely to deny the doctrine of individual initiative. The facts are not to be denied; and the doctrine of individual initiative is not to be abandoned; so reluctantly he turns the industrial processes of building houses over to politics, which, in view of what politicians have done to Europe during this interval of time, is hardly to be rated a promising programme.

But there is something far more serious to be said in criticism of his fact-gathering process and his handling of the facts gathered. There are numerous omissions among the causal circumstances examined. In covering the course of events over the past centuries, no adequate account is given of the growth of credit. Credit economy is referred to but apparently the author does not view this institution as a factor of first importance. Something to the same effect may be said of the moves within the world of finance and the rapidly developing institution of living by owning. Time and again the inquiry approaches the functions of these institutional factors but they are not brought into the case as prime movers. Time and again the inquiry approaches the outstanding characteristics of the modern order of industry; and it is indicated that the common welfare now hangs upon an adequate rate of profit for the owners of the community's industrial plant and equipment, rather than upon the industrial sufficiency of the community, as once was the case. But the inquiry always passes on and so fails to include among the causal factors, which make for the accruing shortage, what may conceivably be rated as the most important of all, namely, the absentee ownership of the community's industrial plant and equipment.

FREDERICK L. ACKERMAN.

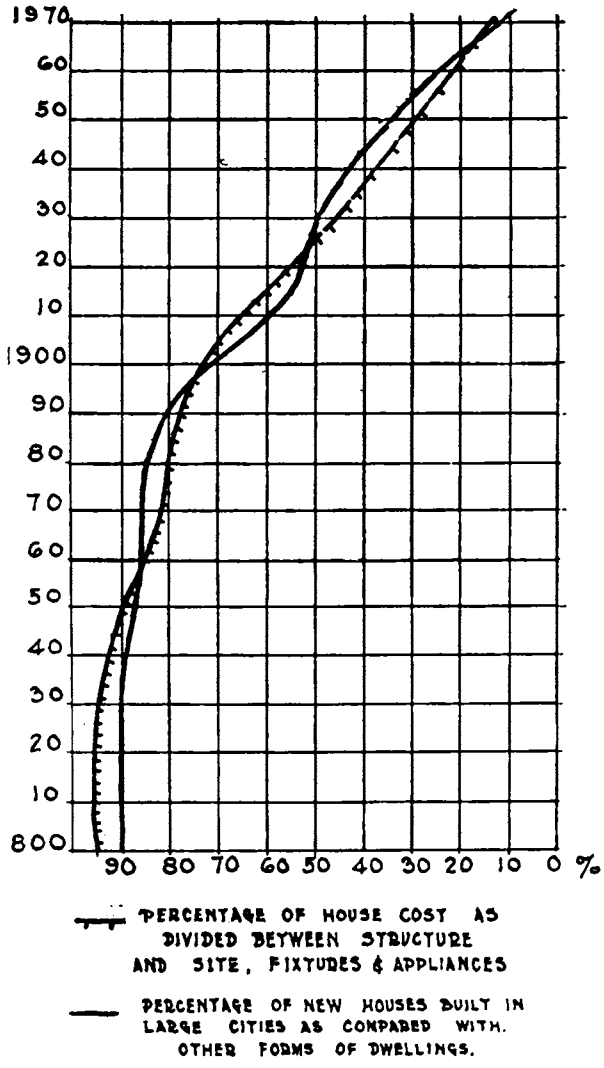
Housing in Russia

Under date of 19 January, the Department of Commerce issued a bulletin which points out that 98 per cent of permits for new dwellings in Russia in 1922 were for homes without stairs.

Present building construction in Soviet Russia, says the Bulletin, according to data compiled by the Commissariat of the Interior from building permits issued by 271 municipalities, and abstracted from *Economic Life* by the Eastern European Division of the Department of Commerce, is altogether of a primitive type. The total number of permits issued in 1922 called for the construction of 8,914 private dwellings, of which two-story houses of brick or masonry represented 1.4 per cent, the balance of 98.6 per cent of the permits covering one-story houses of wood and other semi-permanent materials. No permits were issued for buildings over two stories in height. Small houses of simple construction predominated in large cities and small towns irrespective of their size, the difference appearing only in the proportion of two-story houses built of masonry; while in cities with a population of 50,000 to 100,000 the ratio of such buildings amounted to 4.2 per cent; in cities with a population above 100,000 it is represented by 1.3 per cent.

All new home construction is being undertaken exclusively by the owners themselves, not by investors. The simple, "home industry" method of construction is better suited to conditions in smaller towns than in large cities, because carpenters and other workmen insist upon payment in kind instead of in constantly depreciating Soviet paper currency, which condition is easier met in smaller towns; further, inhabitants of small towns are generally more handy at plain building construction, and building materials in such localities are cheaper or obtained clandestinely from State forests.

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Housing Progress

This significant graph by Mr. Henry Wright should be read in connection with the text and cartoon printed in the January number of THE JOURNAL. It puts in quantitative form the ratio of housing equipment to municipal improvement or "public utilities"; and it suggests quite definitely that the cost factors in housing are conditioned by elements that lie pretty far outside the province of the individual builder or architect. Comparing the curve of increasing site costs with the diagram that indicates the proportion of houses and multiple-family dwellings built in the larger cities, one suspects that relative extravagance in one direction has been counterbalanced by relative economy in the other; so that, even for the better type of housing, the single family unit tends to disappear under our present methods of city development. So long as our cities and suburbs are so depressing that vast sums of money must be spent on providing roads that lead out of them—and all that goes with this—so long, it seems, will the burden of housing increase even for those groups in the community that are able to make an effective economic demand. There is no reason to emphasize here, however, all the various paths of thought to which Mr. Wright's graph and statistics point. L. M.

The Gothenburg Catalogue

Attention is directed to the Catalogue in English issued by the authorities of the Gothenburg Exposition of 1923. It will shortly be reviewed in our columns but in the meantime members are advised that copies may be had for two dollars.

In our next issue we hope to review Mr. S. D. Adshead's new work on Town Planning, copies of which are now obtainable through the JOURNAL'S Book Shop.

London Letter

The year 1924 is to witness the inauguration of the British Empire Exhibition at Wembley, an exhibition which is comparable in scale if not in scope to the famous display of 1851, to which, however, contributions were sent not only from the Empire Colonies and Dominions but from all over the world.

The Exhibition of 1851 witnessed the triumph of the Victorian conservatory *in excelsis,* for its nucleus was the famous Crystal Palace, afterwards removed to Sydenham where it stands today. It was the work of Paxton, famous as a designer of glass houses, and was selected by Albert the Good in competition from amongst 230 odd rival schemes. Today the Crystal Palace remains a remarkable and imaginative conception, its height combining with the elevation of its site to produce a landmark visible for miles around.

Time and architectural taste have changed since 1851, and the Wembley buildings will provide a remarkable opportunity for their architects to prove their mettle, it is unfortunate, however, that the number of architects employed will be considerably restricted, as the design of the greater part of the main scheme is apparently in the hands of one firm, and the buildings will therefore hardly be representative of the present trend of English architecture.

It is early yet to form a judgment, though work on the exhibition is advancing rapidly and some of the buildings on the main avenue are on a fair way to completion. Such designs, however, as have been published are frankly a little disappointing, and awake familiar reminiscence of the classic revival. There is as yet nothing to indicate the promise of a real contribution towards an expression of the age in which we live; nothing as fine in its ordered dignity as the Chicago "World's Fair,"

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as appealing in its charm of handling as San Diego, nor as vivid in its freshness of outlook as last year's Gothenburg Exhibition.

There are architects in the Empire who have the ability and power to express ideas, to examine the realization of which it would be worth while crossing the Atlantic Ocean. Whether they will be given an opportunity on any scale at Wembley is not yet clear; if not it will be a lasting reproach to the authorities responsible and to those whose counsel will have resulted in housing the Empire's finest exhibits in buildings which are not truly representative of the Empire's finest architects.

* * *

At Wembley will be held a public Exhibition organized by the Architecture Club, that increasingly active and influential group of architects and writers which seems to have largely taken over from the professional societies the task of promoting closer relationship between architect and public. At a dinner held in November at the Hotel Cecil there was a larger attendance of prominent members and guests than ever before, but the quality of the speeches was not equally rich and distinguished. Lord Riddell spoke on the well-worn theme of the importance of the architect being a real business man; Mr. Paul Waterhouse, P.P.R.I.B.A., talked amusingly down to the level of a comfortably fed audience, and Mr. Edmund Gosse created a slightly emotional atmosphere of respect for the beauties of the past and regret of modern ruthlessness. Nobody, however, ventured on such themes as that of indicating the lines along which effort might be directed towards the production of a better modern architecture nor was much said which might be considered of real import. One felt that such a meeting, always widely reported, might with advantage discard a little of the after-dinner attitude in favor of stimulating thought on any of the numerous important issues which affect the profession, and through the architect, the general public.

* * *

Mr. Alfred Gotch, P.R.I.B.A., a President enjoying the general esteem of the profession, has formally entered upon his year of office, and the occasion of his inaugural address was also one of farewell to the Past President, Mr. Paul Waterhouse. Every retiring President of the Royal Institute finds his portrait added to the imposing gallery of pictures which forms an interesting record of types of personalities and painting; the latest portrait is therefore that of Mr. Paul Waterhouse, fittingly immortalized by Sir William Orpen. Does the American Institute still follow this custom?

The past Presidents are men who, unlike the prophets, are honored in their own country, but it will be interesting to see whether twentieth century conditions will also produce the type of man who will be equally honored by the nation at large, such men as those whose records entitle them to repose in England's Pantheon, Westminster Abbey. Street, Sir Gilbert Scott, and Sir Charles Barry have their tombs in the North Aisle, close to those of Robert Stephenson, Ben Johnson and Livingstone, and there is still room in this corner of talent. But perhaps nowadays fair achievement is too general to enable one man in his life-time to climb far above the heads of his fellow artists.

* * *

The assessing of Public Competitions continues to be a sore spot on the architectural epidermis. Two recent important competitions have called forth pointed comment from some of the competitors, the first being a limited competition for sets of Chambers at King's College, Cambridge, facing a spacious lawn stretching away towards Clare College, and forming a block at right angles to Gibb's famous building of King's.

In this case there was a single architect assessor, who apparently advised a committee of laymen as regards the plans and technical points. The premiated design had certain defects, but a main point of dissatisfaction was its alleged violation of the conditions in not providing the full accommodation asked for.

The second competition in question was that for a new Art Gallery for Hull in which the premiated design was particularly disappointing in its failure to attempt any solution to the problem of the present defective system of toplighted galleries, in spite of the fact that the programme laid particular stress on effective lighting as the principal requirement.

Such criticism by competitors will certainly continue to be levelled as long as architects feel that the system of the single assessor may fail to reward the best designs. Many architects of experience feel the necessity for a Jury on which the promoters will have reasonable representation, on the theory that those who pay the piper should have something to say about the tune.

* * *

Next year will witness an increase in the number of publications dealing with architecture. A whole series of new books will treat of famous cities, somewhat in the manner of the French series of "Les villes d'art célèbres," and monographs on famous architects will include the names of Bentley, Chambers, Vanbrugh, Inigo Jones and Hawksmoor. In the meantime the architect is maintaining his modest place as a character in fiction, following the lead given by Galsworthy and Arnold Bennett in the "Man of Property" and the "Roll Call."

This time it is Mr. Aldous Huxley who, in "Antic Hay," touches lightly on the dreams and disappointments of the profession. His architect honors the book by remaining the most unsullied person in it, and in addition is thoroughly characteristic with his model of Wren's plan for London and some pungent criticism of the new Regent Street. "There are some streets . . . senseless discords and a horrible disorder all the way. And the one street that was really like a symphony by Mozart —how busily and gleefully they're pulling it down now! Another year and there'll be nothing left of Regent Street. There'll only be a jumble of huge, hideous buildings at three-quarters of a million apiece. A concert of Brobdingnagian cats. Order has been turned into disgusting chaos. We need no barbarians from outside; they're on the premises, all the time." One has an uneasy feeling with Mr. Aldous Huxley that this is not far from the truth.

"X."

January, 1924.

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The Secretary's Page

17. FAIR PLAY. We are all of us interested in the matter of fair play as between the architect and the client. I think you will all agree with me that fair play on both sides will usually result in satisfied participants in any building endeavor. Usually we find either party trying to explain what the other party must do to give it what it considers fair play. Very rarely do we find a party trying to explain what it must do to give the other party fair play. To my mind this latter thing is what the architect ought to be doing right now.

18. AN EXAMPLE. There recently came to my desk a little pamphlet, entitled, "Lutheran Church Art," Vol. 2, No. 3, printed in Cleveland, Ohio, November, 1923. It states that it is "Printed from Time to Time in the Interest of Better Lutheran Architecture, Music, Liturgics, Paramentics, and Kindred Subjects." This particular number devoted nearly half its space to the subject of architecture and architects. As I read it, not being familiar with the little pamphlet, I wondered who and how and why and so forth. It was worth studying. Then I found that it was being published by the Rev. F. R. Webber, 13706 Glenside Road, N. E., Cleveland, Ohio, and that he is trying to broadcast through the Lutheran churches the general doctrine I have quoted. In the number to which I refer there was published an article entitled:

18-a. "BEATING THE ARCHITECT." Now as this article was printed in full in the January issue of THE JOURNAL, it only remains for me to give all possible emphasis to it, and then to inquire—

19. WHAT CAN THE ARCHITECT SAY? It makes it a bit embarrassing, doesn't it? There isn't any indication that the architect might have been at fault. I feel almost ashamed to call attention to such a wonderful clear-cut fair plea for proper treatment of the profession without a single thought that there could be anything but fair treatment in return. I regret to say that there has not always been fair play on the part of the profession, for unfortunately the profession does contain a great many men who have no right to the title of architect. The time has come, it seems to me, for the profession of architecture to clean house. Without the direct encouragement of so-called architects the things that are done that are so manifestly unfair could not be done.

20. WHAT CAN THE INSTITUTE DO? The Institute stands for all that is best in the profession. Then let the Institute take up the matter of seeing that each and every member in it gives fair play to the owners. Let each man insist on giving a complete and full service. Let the entire publicity of the Institute show what such a service means. The question of the fee will disappear if the service is given. Most of the troubles arise from a lack of the giving of a good service. Each man that gives an inadequate or poor service simply proves to the owner that there is nothing in architectural service.

Why not let the public know that a sign over the door or an imposing letterhead, or a smug or clever statement doesn't mean that the man in question knows anything about his business? Why not so inform the public as to what an architect should do that they will be able, very quickly, themselves, to know that they are or are not getting the value for their money. Why not talk a lot about ourselves and what we are trying to do and what we should do, just as Mr. Webber has so courageously done, before we talk about others. Why not be perfectly frank not only to ourselves but to the public at large. WHY NOT?

EDWIN H. BROWN, *Secretary.*

Public Buildings

In his Annual Report, Secretary Mellon, in the section devoted to Public Buildings, says the following:

"Because of abnormal conditions resulting from the World War and continued excessive construction costs it has been necessary to postpone the erection of a large number of Federal buildings authorized in the omnibus public building act of March, 1913. In the meantime no additional public buildings have been authorized to be constructed, and as a result many years will be required to provide buildings in communities where they are greatly needed. Prudence would suggest the necessity for a carefully considered public building program, and it is believed that the following recommendation made by one of my predecessors, Secretary Cortelyou, in a report addressed under date of 7 December, 1908, to the Speaker of the House, should receive serious consideration:

" 'Further change, it is believed, could be made to great advantage. The present system employed in connection with bills for public buildings is not conducive to the best results. A great mass of bills is annually poured in on the department with requests for early reports. In many instances the buildings authorized are unnecessary for the public business, and in the interests of economy the construction could be postponed for several years. Insufficient time is allowed for investigation as to the requirements of the buildings proposed, or in fact for an accurate estimate of cost. As a result it frequently happens that a number of buildings are authorized which are not required, and, on the other hand, no appropriations are made for localities in which the Government is urgently in need of adequate buildings, and is in all probability paying large rent for insufficient quarters.

" 'Public building appropriations should be put on a basis similar to that now employed in connection with appropriations for river and harbor work. If this were done the Congress would submit to this department a list of localities with the request that at the next session a report be submitted showing—

" '1. The necessity or advisability of a building in the city or town suggested. This would necessarily embrace the size of the city, the cost of the building, and the price at which rented quarters are to be had.

" '2. If a public building is recommended, the area and

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probable cost of the site; the size, cost, and character of the building that should be erected; the branches of the Government service that would occupy it when completed; and the annual cost of its maintenance.

"'3. The amount of appropriation necessary to carry on the work during the ensuing fiscal year.

"'With such a report, carefully made in detail after consultation with the other departments interested, the Congress would be better able to judge of the advisability of authorizing a building and of the appropriation required. I am confident that by this method a great saving could be effected and that buildings could be more satisfactorily and economically distributed.'"

The Institute will heartily support such a program and it heartily welcomes the opportunity to congratulate Secretary Mellon on his breadth of view. What is yet to be feared is that the urgency of needs throughout the country, in the matter of Federal buildings, will still lead to legislation of the omnibus variety, especially if Congress is asked to sanction the recommendations of the administration for a program for buildings in the city of Washington.

In view of the fact that the Government is now paying 20 millions a year in rent, the report of the Supervising Architect's office might well lead one to go a step further than does Secretary Mellon. It appears that there are fourteen buildings authorized previous to the Act of 1913, and 125 authorized by and subsequent to that Act, which are not yet under construction. Four new buildings only were completed during the fiscal year of 1923. Such a record could not be tolerated in any growing business, and we do not see why the waste needs to continue. A rental charge of twenty millions can be capitalized. Other sums could be saved by larger quarters or increased facilities. The architectural profession throughout the United States has a record such as places it at the very front, technically and esthetically. Business uses this organization and expends billions through its various offices. The government can do the same, with a vast saving to the people, an imposing increase in their comfort and convenience, and a beneficent addition to the architecture of the country. As we have already made clear, we believe that architects should be selected by the government, under proper provisions, and that wherever possible they should be locally chosen and locally inspired to study their problems in the light of local materials, traditions, and customs. Here lies a field that all other governments cultivate assiduously, with profit to all.

At the Federated Engineering meeting held in Washington, 9 January, where there were present approximately one hundred delegates representing some sixty different organizations, all of whom, except the Institute delegates, were identified with engineering and construction interests, the question of the reorganization of the governmental public building activities was discussed at great length. Readers of THE JOURNAL will remember that this movement has long been under way, and culminated generally in the Jones-Reavis bill as it was called, which was introduced into the Senate in 1919. The points of this bill were chiefly the suggested creation of a Department of Public Works, and the gathering together of all the government's public building work thereunder. The Secretary was to be a cabinet officer. The deliberations of the meeting on 9 January resulted in the passage of the following resolution:

WHEREAS, the present structure of the Federal Department represents the unpruned growth of many years and is imperfectly adapted to present needs; and

WHEREAS, definite recommendations have been made by both President Harding and President Coolidge emphasizing the need of a reorganization of public business, and a plan of general reorganization of departments is under consideration by a joint committee of Congress; and

WHEREAS, the engineers and architects and related technical professions of the country have for many years advocated the establishment of a National Department of Public Works in which the matters relating to public works might be administered and co-ordinated, and

WHEREAS, the consideration of recent bills for the creation of a Department of Public Works was suspended in the interest of a general reorganization; and

WHEREAS, this subject has received the careful consideration of this conference representing more than sixty engineering, architectural and related organizations from all sections of the country, and

WHEREAS, the establishment of a Department of Public Works would make it possible to place governmental engineering and architecture on planes reflecting the highest achievements in these proessions, known to the world; and

WHEREAS, a co-ordinated functioning of all public works agencies would be able to stabilize business and employment by expanding public work when private industry and employment may be slack, and by reducing such work as far as practicable when private industry may be fully absorbing the available supply of men and materials; and

WHEREAS, the advance and co-ordinated planning of public works is sound economy in that it permits the government to execute less work at peak prices and more work at the lower prices prevailing during dull times; Be it therefore

Resolved: That this Conference of engineers and architects, and allied interests, heartily approves the movement for a reorganization of Federal Departments, and it particularly endorses grouping and co-ordinating within an existing Department, preferably renamed a Department of Public Works, the construction and administration of all non-military public works. M. B. MEDARY, JR.,

Chairman, Committee on Public Buildings.

Faience

In an address to the members of the Tile Manufacturers' Representatives Club of New York, Mr. A. Vanderlaan, one of the leading authorities on faience in this country, said some very interesting things:

"To a tile and faience manufacturers' representative," said Mr. Vanderlaan, "it is almost superfluous to say that unless a man loves faience, its textures, its colors, its expression and its history, he will never be able to distinguish himself in this field of the arts. He may do well

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enough as a tile-salesman; he may be able to know all about its *price,* but he will never know its *value.* And value, not price, is what counts.

"Value of faience lies in its quality, and quality in faience as well as in paintings, books, men or women, is evidenced by the pleasure which one finds in their presence and the desire which they create to have them as steady companions.

"It has been said that graves are silent, but through faience, the graves of antiquity have spoken louder than any other existing records. Wherever in the dim and forgotten pasts, civilizations existed, we have but to dig amongst the ashes of the dead and the long forgotten, and we find vases, urns, rings and tablets of faience bearing indestructible witness to the character of these vanished and sometimes completely obliterated civilizations. From the craftsmanship, shape, color and decorative values of their earthenware, we are able to reconstruct and judge those past cultures. We judge and admire the marvelous Persian, Greek and Egyptian civilizations or we discuss in a spirit of criticism cultures as expressed by the earthenwares of old Etruria. We, our civilization, our culture, will also be judged some day by what we are producing today in that indestructible field of artistic endeavor: *faience.*

"Do we at all times bear in mind the seriousness of this responsibility? Will our great grandchildren stand in awe, and revere the memory of our artistic performance? Will they admire our craftsmanship, our taste, our understanding of what is 'fit and meet'; when for instance they descend into the tunnels which we of today are using for subterraneous transportation? Can there by any doubt in your minds as to the negative appraisal by future generations of our artistic culture as expressed in those diggings? And is the architect to blame? Most decidedly not. He employed the best opinions, the best tools which the keramists of the country saw fit to put at his disposal.

"The student of that future day will recognize that amongst much ruthless commercialism (whereby of course I do not mean the legitimate use of clean and sanitary white wall tile) here and there a conscience, a soul has been born. He will notice interesting, encouraging strides in the right direction.

"A man by the name of Mercer will be given a place of honor as a pioneer in the field of honest Ceramic Art. Alongside of him will be placed Herman C. Mueller of Trenton, N. J., who for American Faience has done what his namesake Francis H. Mueller during the last 25 years of the 18th century did for the development of Copenhagen Faience.

"Considerable credit will be given to the work of Wm. H. Grueby of Boston and H. Dulles Allen of Enfield, Pa., who never sacrificed their art for mere financial gain and who in spite of material sacrifices remained true to the ideals of their profession.

"I touched a moment ago on the appraisal of past cultures and would now ask you to go back about 2500 years, in order to get a glimpse of old Etruria, according to such authorities as Prof. Richard Norton of Bryn Mawr and of Henry Beauchamp Walters of the British Museum. The origin of Etruria is lost in the ages, but from about 1000 years before Christ, Etruria, lying on the East coast of Italy, seems to have been peopled by enterprising traders. Through the Phœnicians, the Etruscans entertained steady intercourse with Greece, Assyria and Egypt.

"The quantity of terra cotta antiquities which have been found in the territory occupied by the Etruscans is vast and the quality of some of the vases is so exceptional that for centuries the Etruscans have passed muster as a people who as ceramic artists and craftsmen were equal to the Greeks themselves.

"Careful study, however, has definitely proven that the best of the earthenware found in Etruria was made in Greece and imported from there. Etrurian ceramic art expressed itself by the Etrurian's understanding and appreciation of the higher art of Greece, which, broad-minded as they were, helped and inspired their artisans to efforts, and obtained results for them far in excess of what they otherwise would have accomplished.

"Reviewing the history of ceramics, we continuously meet with the same cause and the same effect. Up to the twelfth century Italy, after the fall of the Roman Empire, produced only the simplest kind of solidly glazed green, yellow and brown pottery. We read that after that date experiments were made in the town of Faenza with pottery made after the fashion of the Spanish Moors and brought to Italy by ships from the island of Majorca, after which the pottery was named Majelica.

"Mr. Robert L. Hobson, of the Department of Mediæval Antiquities of the British Museum, lays particular stress on the obligation which the Italian Majolists owe to the Spanish Moor whose wares inspired them to such a degree that about the year 1500 lustres were obtained of a tone and quality which has never been surpassed.

"The history of French Faience is the same as the Italian except that it does not begin until 1384, when Spanish artisans were imported to make tiles in the Spanish fashion. Italian wares and artisans were imported as late as 1529 when one of the Della Robbias was invited by the king to come to France to decorate his castle. As a result, *and to the glory of France,* the world famous potteries of Rouen, Nevers and Sevres were inspired and grew up.

"Wherever we see great developments in Faience we see it preceded by liberal policies inspired by true appreciation of the higher art achieved in other countries. There is little doubt that Holland learned the art of making fine faience through the Spanish and Portuguese Jew-refugees, who found asylum in that country after their expulsion by the Inquisition. Later on their art was extended and perfected by the stimulus of Chinese and Japanese potteries. England again was stimulated by the example of Holland. According to the above quoted Mr. Hobson of the British Museum, the great advance and development of the English art does not begin until the Dutch potters settled in Staffordshire in the year 1690.

"In the days of which I spoke, we do not read of combinations or guilds who believed that they had nothing to learn, who vowed that their efforts were good enough

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for their country. We do not read of distinctly unpatriotic efforts to retard the technical and artistic development of their country by obstructing in every way the introduction of more highly developed materials. Wherever we look, the opposite has been the case. History is worth noting unless it teaches something. And here indeed a valuable lesson is still to be learned.

Public Information

The Alabama, Colorado, Dayton, Georgia, Michigan, Montana, New York, North Carolina, San Francisco, Scranton, Wilkes-Barre, South Carolina, and Southern Pennsylvania Chapters are being supplied with the articles issued by the Public Information Committee of the Institute. The titles and authors of these articles are "The Schoolhouse Beautiful," William B. Ittner; "Snappy Styles in Housebuilding," Florence E. Haviland; "The Manufacturer Reviews the Architect," Edward H. Putnam; "How We Came to Plan Our City," Thomas Adams; "The Clinic in Architecture," Horace W. Peaslee; "A Little Sermon on the Triangle with Particular Emphasis on the Architectural," George S. Chappell; "Church Architecture," Ralph A. Cram; "Factory Buildings and Good Architecture," Albert Kahn; "Just a Love Nest," Robert Benchley; "Planning the Attractive Town," George B. Ford, and "Plan of Washington," by Charles Moore, and a second article by George Chappell.

The Dayton Chapter has been active in publishing articles in the Dayton *Sunday News*. They have guaranteed to keep the paper supplied with material for at least a year. The newspaper publishes the articles exactly as written and seems to be glad of the opportunity. Now that the start has been made, the members, at first slow to respond, are taking greater interest. This Chapter is beginning the publication of the series of articles furnished by the Public Information Committee of the Institute, having made arrangements for this with the Dayton *Sunday Journal*. Thus they hope to reach the subscribers of both papers. The Chairman of the Chapter's Publicity Committee is Walter G. Shaeffer.

The New York Chapter has made arrangements with a professional press agent. They found that it was difficult to reach the New York press without the assistance of an expert for the preparation of material and for placing it. The fee charged is comparatively small and it is possible that others among the larger Chapters might find it distinctly to their advantage to follow a similar policy.

The Washington, D. C., Chapter has been issuing most interesting weekly articles in the Washington *Post*. Some of the titles are: "Architect Seen Mainspring of Home Beautiful Building," "Architect's Job Outlined," "Readers' Queries Sought," "Expert Discusses Contractors' and Architects' Fees." They appear in the Home Beautiful Section. This activity is due principally to the efforts of Harry F. Cunningham, Secretary of the Chapter.

JOHN V. VAN PELT,
Chairman, Public Information Committee, A.I.A.
126 East 59th St., New York City.

The Esthetic Side of the Engineering Profession

Long ago when Nature set out to design trees on a large scale fundamental rules seem to have been followed. No reduction was permitted in the cross section of a trunk or twig, for instance, except where it branched into two or more members; and the cross section of all branches would exactly equal the cross section of that body from which they branched. Thus did nature care for the distribution of material to obtain proper strength.

As the pilgrims on a new continent, whose first concern was to find food, clothing and shelter, instinctively developed the refinements of architecture as soon as they had satisfied their need for shelter, so Nature seems to have planned in a masterly manner for the esthetic side of her work. She could not allow the elm tree to grow a cylindrical stem up to where the main branches form that Gothic semi-arch; nor would she alter her fundamental rule of design. And the trunk, sending forth twigs and sprays at frequent intervals, effects a gradual tapering of the stem according to her rule, even if these twigs are later to be broken off, and thus we have the pleasing, gradual tapering of the column. This is but an example of how unfailing Nature is in considering the esthetic as well as the structural features of her design.

In the engineering world, the designer is charged with the responsibility of clothing his parallelogram of forces in metal of a strength sufficient to withstand normal and abnormal conditions, but also able to pass economic approval. He may increase his factor of safety in strength until the cost of material jeopardizes his chance in competition; or he may economize on material until he loses his reputation as a designer on the ground of poor judgment in strength. Again, he may attack his problems from a different angle; he may find a new principle of application so that he can clean his slate and work up a simpler design.

Such are the design problems facing the engineer from his school days to the end of his career. His education and training have been calculated to buoy for him a safe course; and if he has been putting his whole heart into his work for a few years he has made progress. Like the plant in the flower garden which at maturity is ready to put forth flowers, so the talented among the engineer-designers are now beginning to appreciate and seek the esthetic aspect of their work. The sooner the engineer-designer reaches maturity in the fundamentals of design the sooner this latent feature begins to blossom forth. Hence it is important that the executive so distribute the duties among the younger and the maturer members of his designing force as to obtain the desired result. A mechanic must know his tools; this applies equally well to the engineer and his designing corps.

It has often been possible, for example, on a visit to the foundry or the casting shed, to identify the work of as many as twenty different designers from the rough machine parts. There can hardly be, in any line of work, a wider opportunity for individual expression than in the world of engineering design.

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Has the esthetic side of engineering design been given proper credit? In a new country like ours with the most daring developments daily pushed into being and fruition, esthetics may be expected to lag for a time. Periods of prosperity have kept us too busy for esthetic buds to grow on design, and the frequent business depressions have had a tendency to blast the attempts. This, perhaps, because such results have not been seriously guarded against. Our country, in the forefront of the engineering world, must wake to the importance of this subject or face a just criticism in the comparison with foreign built goods. To fully appreciate this one should have had an opportunity to examine a domestic design, and its foreign likeness where a greater attention has been given to esthetic features. There are more such cases in existence than our engineers realize. But let it never be forgotten that good appearance inspires confidence in the machine, as well as admiration for its builder and designer. Now the engineering world today is in grave danger of losing the *esthetic feature of design,* and this threatening loss may be even more far-reaching in its scope, for that which blasts the buds and blossoms may also dwarf the plant.

During the war industrial production was accelerated by intensive training and shortened terms of learning. Quality was expected to wane except where it affected our combative efficiency. The result today is our daily question: Who has patience and time to learn a thing thoroughly? Unfortunately the engineer of today is gradually becoming more helpless, partly under the drive of specialization. While the drawing is the language of the engineer, he cannot make one, nor supervise the making of it. He can no longer design a piece of machinery, nor even make a good sketch. He may be able to dictate long letters telling a draftsman to make drawings for him; and the draftsman may be ready to draw lines by the yard, circles by the dozen, and projections by the square foot. But *who* is to design the machine or apparatus for this engineer?

The art of engineering design is today in grave danger of losing ground in a widening gulf between engineers and draftsman. Pointing out the danger is but the first and easiest step towards a remedy. Should not the next step be to give credit where credit is due, to recognize the designer as a factor in the engineering world and provide for his training?

EMIL G. BERN.

Portland Cement
1824-1924

Joseph Aspdin, receiving his patent from the British Government in 1824, for a material he elected to call portland cement, no doubt had a vision of great things, for all things in this world begin in a dream. Perhaps he may have felt that the process of building would be completely revolutionized in the decade succeeding the granting of his patent, and if he called his invention by the name of portland, it was because he may have believed that its resemblance to the stone mined at the famous quarries of Portland, so wonderfully described by Hardy in *The Well Beloved,* would help to bring about the revolution.

Certainly the tale of portland cement is like many another and the telling of it is far from over. It is still too early to predict the nature and extent of the changes it has brought, if one looks over the field not as a bookkeeper but as an inquirer. The 135,000,000 barrels of cement that flowed away from the American factories have brought many blessings, undoubtedly, and yet the bald fact stares us in the face that cement costs more than ever, that building costs more than ever, and that we are not likely ever to see any permanent abatement in the upward climb of building costs.

Esthetically we note an improvement. Cement is being more intelligently used and its craftsmen are making some progress away from the unsightliness of the early years. Much remains to be done in this direction, but more still remains to be done in bringing cement to that state of economic usefulness and benefit which alone indicates a true and abiding progress. The problem is not one of the industry itself, but of our whole economic existence—yes, even of our national being. H. C. B.

From Our Book Shelf
Mozarabic

Iglesias Mozárabes[1] is a very well-made book—good paper, beautiful letter-press, excellent arrangement and illustrations. It is a treasury of reference for the period it covers, and possesses more than one sort of interest. It is a close and paintaking inquiry into the Mozarabic character of churches throughout the Peninsula, built during the ninth and tenth centuries. Even a superficial examination of the text shows how diligent and exhaustive the inquiry has been, and how much of enthusiasm supported it; the evidence adduced being most various: the buildings themselves; their types of plan; distinguishing details; peculiarities of construction; everything ascertainable bearing on their history, including manuscripts, inscriptions, codices, church inventories, furniture, as well as tradition, legend and even folk-lore.

Before glancing at what research of this character implies, it may be well to define what is meant by Mozarabic, i.e., pertaining to the people called *Mozárabes.* The author states it thus: "The concept of Mozarabism embraces two phases, that is to say: Christianity subject to the Mussulmans and living together with them, and the emancipated Mussulmans, whether they rise as rebels in their own lands, or emigrate to Christian countries, where they represent the Southern Andalusian influence under diverse aspects. There enter, therefore, into our series, not only the churches properly Mozarabic, but all those of conquered countries, that owe their being to Christians of the South and follow the rules of Gothic art first and of Cordovan later on, in face of the other group of edifices emanating from Northern influence, and that signify, in their turn, the invading penetration of Europe." By Gothic, of course, is meant that which

[1] IGLESIAS MOZÁRABES: ARTE ESPAÑOL DE LOS SIGLOS IX A XI. Por M. Gómez-Moreno.

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is of the Goths, who established themselves in Spain long before the advent of the style we commonly denote by that name—in Spanish *godo*, as against *gótico*.

The problem confronting the author was to determine, by the means above noted, the provenance of the buildings in question, an essential factor being the verification of dates. This because he maintains that Mozarabic art is to be circumscribed within the limits of the period 850-1030, the period of the flourishing of the Califate of Cordova, during which there was a cultural advance of the utmost importance, and when, he claims, Spain nationalized herself, as much as was possible. His contention, very broadly summarized, is that the product of this fertile period, carried into the North by the movements of the Southern people, because of political and religious disorders, and meeting there the Visigothic, there grew out of the contact a characteristic national art, and that though, for whatever reason, this failed of its full development, the technical base on which it could have realized itself exists and is revealed by these buildings. The historic ground traversed is an exceedingly complicated terrain—indeed, Spanish history in general is of somewhat baffling complexity—and there is indication of controversial possibilities. To arrive at an opinion of the validity and success of the attributions put forward would involve an acquaintance with the whole subject far more intimate than is possessed by more than very few Americans. There is all the appearance of most scrupulous care in documentation and much look of authority.

No small part of the attraction of these buildings, at least for the Spaniard, lies in the theory that, however rude, they contain the germs of design and structural methods capable of development in a larger and finer way, and expressive of the racial genius. They are by no means lacking in suggestiveness even for us, who gather our motives with so eclectic a net; but although actual beauty exists in a number of instances, the dominant aspect is somewhat primitive for a profession that is not distinguished by fervor for archæological research and is fond of culling ripe fruit.

But to the student of early ecclesiastical architecture, who can discern the latent possibilities offered; who can delight in certain positive charms of composition, as at San Salvador de Valdediós, Santa Cristina de Lena, San Miguel de Escalada, San Cebrián de Mazote, San Millan de la Cogolla; and be rejoiced by details of not unfamiliar type but of a very special virility—to him this is a book to be commended. And if, in addition, he happens to be curious about the Spanish mind, he will be further rewarded.

Within the compass of a few pages there is a rich picture of the currents of civilization that have affected the arts of Spain; there is a luminous account of the relations of Christians and Moslems; there is a catholic perception of the sound way to approach the study of history; there is a bold dismissal, with sweeping gesture, of convenient but misleading historical formulæ, and there is an appeal to the true genius of the race—and a great race it is.

Preoccupation with making history a thing alive—the recognition of Clio as a Muse—manifests itself in many Spanish writers; it was the mainspring of the remarkable series of *Episodios Nacionales* of Pérez-Galdós; it appears in many an essayist and other writers. And, to one reviewer at least, nothing in the realm of literature is more appealing than the desire that for the past quarter-century has inspired so much of Spanish thought—the yearning toward self-realization and the standing firmly upon their own feet. For it is a noble aspiration of an indomitable people. Perhaps no country has undergone such a series of successive waves of outside influence as Spain, had so much imposed upon it. And the marvel is that despite it all, foreign conquest, foreign politics, foreign thought and fashions, foreign arts, the Spaniard has remained as Spanish as his sonorous preterites and florid conditionals. No matter how you prank him out in alien modes you never swamp this African Visigoth.

C. Grant La Farge.

Marginalia Architectura

The origin of Architecture is buried in the obscurity of the gigantic past. What changes have the discoveries of the human mind wrought since the days when our first ancestors covered their simple roofs with thatch! The spirit of unrest is imperious. Havelock Ellis tells us that it is our high privilege to be living in a great Classico-Mathematical Renaissance. In connotation, it may be said that during the last seven or eight lustra we have seen the revival in rapid succession of as many historic styles. The leaders of the architectural profession have not disdained to play the gamut of the great scale, even the clever ones, *"qui Xantho lavis amne crinis"* (Horace is such a help in starting out), footing the Lesbian measure, some trippingly, others with halting strophes in response to the perennial demands for novelty.

Romanesque forms are again revived with considerable pomp and circumstance. As we remember, it was about 1888 that the Romanesque style was in its perihelion. Every architect's office in the United States, with few exceptions, had a pseudo-neo-Romanesque building of some sort on its boards: courthouses, railroad stations, public libraries, state capitols, town and city residences in the style of Theodosius, Dagobert, Chilpéric, Charlemange, and Louis le Debonnair were considered very swank in those days. A few short years saw a violent reaction, and in the buildings of the Columbian Exposition a notable group of architects collaborated in producing the famous Court of Honor. Here the calm majesty of Greece, the glory that was Rome, were set in scenic plaster, covering vast forests of two-by-fours, embellished with countless sculptured deities, dancing fauns, edacious cupidons, miles of eggs and darts, dentils, frets, running bands, interlaces, arabesques, beads and reels, and myriads of anthemia and acroteria. Here was the chance of a lifetime for architects, draughtsmen, sculptors, and painters. An æsthetically starved public looked on with

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delight and admiration, as the magical White City took form. Despite some incongruities the finished result was very beautiful. The genius of Charles B. Atwood, a dominant mind and vital personality, whose guiding hand was evident, seemed to correlate the varied schemes into an harmonious whole. The Peristyle and the Art Museum were the most distinguished structures, suited in every way for their purposes, and imposing to a degree.

* * *

The next lustrum might be termed the Period of the Cartouche. History took a big leap and landed in the lap of the Grand Monarque. No building was complete without one or more of these crowning *motifs. "Le style rocaille a abusé des cartouches,"* as the copy-books say. Many buildings of a quarter-century ago bear striking testimony to this wild scramble for faddism. A few examples are cleverly and ingeniously wrought. On the whole, however, the revivalists lacked the imagination of the Mansards (Francois and Jules Hardouin), Claude Perrault, Francois Blondel, André le Nautre, Jacques le Mercier, Louis de Foix, and Philibert de l'Orme. After the period of Louis XIV, we naturally turned to the eminent artists of the eighteenth century, whose work is most closely identified with what is termed the *Style Louis XVI.* This period naturally suggests Jacques François Blondel, concerning whose private life an interesting sidelight is revealed in the Memoirs of Casanova, to which we shall ask permission to allude later. This Louis XVI style has hung on tenaciously and is still going strong, though not with the same ebullient fertility of the decades of '98 to '08. During those years there was a curious interlacing of styles with touches of Spanish influence, here and there, and always a strong tang of the Italian Renaissance. No finer examples can be found than such buildings as the University Club and Tiffany's in New York, and the Boston Public Library, which is French in conception to be sure, but Italian in spirit. The ponderous North German Lloyd, the Late Pullman, and the Early McKinley styles, as well as the Alfalfa Renaissance of the Western Prairies were the precocious *enfants terribles* of those days.

The construction of a cornice, crowning a skyscraper of the vintage of '03, was a veritable *tour de force* of mechanics. Countless tons of terra cotta, limestone, and granite hang suspended, even now, over our city streets. Modillions, weighing many quintals, are anchored to facias, that, in turn, are supported by channels, tees, bolts, nuts, washers, and divers bits of ironmongery, while we walk like Damocles on sidewalks below.

* * *

The Period of the Great Cornice, judging by recent examples, appears to have subsided, and the Period of the Great Door is now in our midst. It was held by some that the cornice should be proportioned to the whole building, like the Strozzi, the Farnese, or the Ricardi, say, but when the building is ten or twenty stories high the strain becomes tense and the mouldings Gargantuan. The Great Cornice is no longer deemed necessary, but by a curious paradox, perhaps to intensify the building's fucatiousness, the Great Door has arrived and is now inflated in proportion to the whole façade, sometimes running up five or six stories with voussoirs of Cyclopean dimensions.

* * *

The influence of Robert Adam (that inspired Scot who gave Spalatro back to the world, the distinguished architect of Reddleston Hall, Derby) is noteworthy in many of our large cities. Luxurious hotels, county courthouses, automobile clubs, and commercial buildings, embellished with cinerary urns, fluted bands, and draped sheeting with flat rosettes at chaste intervals began to appear as the very latest and most correct architectonic expression. Here, again, is the inevitable reaction from the overemphasized and ponderous detail that was supposed to denote strength and lasting power. In this later work, all the projecting mouldings are kept very flat, the reveals delicate, and a half-inch set-back for twenty stories is not unusual to indicate the metonymical division of a bay.

The varieties of the Adam Style are the Wedgwood, used mostly for confectionery shop interiors, and a peculiar arrangement of forms without any mouldings whatever. Large plain surfaces are deployed with contrasting ornament and sculpture in unconventional places. Inserts of contrasting materials are ingeniously displayed; the ornamentation has a haunting, weird beauty, like unto, in a manner of speaking, the work of genii, elfs, salamanders, or hadji, that is two-thirds Greek, one-third Byzantine with a dash of Taj-Mahal bitters skilfully blended to taste; a sort of djinn cocktail, as it were. The revivals of the Romanesque and the Byzantine are more orderly and conventional, possessing a matured beauty and scholarly charm that the earlier work lacked.

* * *

H. H. Richardson possibly was right in selecting these styles with their wealth of naïve detail varying textures, and richness of coloring, to give expression to the complexities of modern life. Our large cities are in essence like that Byzantium, which for centuries was the great trade center of the world, the meeting place for many nations. Perhaps a modified Byzantine art corresponds more closely than any other to our time and customs.

* * *

There has frequently been mention in the professional press of the baleful influence of the Classic and the Renaissance on modern architecture and the part played by the Chicago Exposition of '93. Can it really be as sinister as Mr. Sullivan declares in his autobiographical epic in the September (1923) JOURNAL, that the insidious toxic-poison of the "White Cloud" has gnawed like a canker and withered as if by a blight the tender cotyledons of budding American art? Is the academic mind pallid and affected with virulent snobbishness? Is this even the land of the free, and will "lesions significant of dementia" last until 1943, if not longer? There are many who, while admiring the genius of Louis Sullivan, and welcoming the honesty and sincerity of his contribution to the advancement of the art of architecture, are just as earnestly and conscientiously working in other directions. New forms, new theories, new harmonies lie embedded in the principles and elements of the art of the past. It is for "the hand that serves the brain to break the spell."

The Lincoln Memorial in Washington is a great work

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of art, thoughtfully original in spirit and form, comprehending in detail, mass, and plan, a significance that is peculiarly suited and appropriate to its subject. Purity, strength, and breadth of vision are inherent in all its lines. The Freer Museum, in Washington, conceived in different elements, is a dream of loveliness and beauty. It is austere, fresh, virile, and a balm to the soul. The Cunard Building in New York is a masterpiece. It is beautifully planned, dignified, imposing, picturesque. The details and the execution have been worked out with the utmost care and meticulous attention. The Harvard Freshman Dormitories, in Cambridge, form a simple group of buildings than which no college can boast a finer. They are academic, severely plain, built of old brick and painted wood. They are the twentieth century reincarnation of the best period of the eighteenth. The great state of California is fairly pullulating with examples of the very best type of Spanish Colonial, some of them reminiscent of dear old Machinery Hall, Chicago, '93. These recent California buildings seem like a vision in a dream, they are as ethereally beautiful as the demesne of Kubla Khan. Hardly a city in the entire country but what contains examples of architecture that are fine, modern, and progressive, not concerned with "cobweb weaving scholasticism," yet told in terms of academic formulæ.

The same condition confronts us when we examine the modern work that is based on the revival of Monastic forms. If this is the result of the virus of the "White Cloud," then let us be inoculated with this beneficent toxin at suitable intervals.

H. G. R.

Announcements

The pre-publication price of $8.00 for *The Portfolio of Drawings* (bound) by Louis H. Sullivan will be withdrawn on 1 March, 1924, when the price will be advanced to Ten Dollars.

Mr. Stephen Francis Voorhees has been appointed to represent the Institute before the Division of Simplified Practice, Department of Commerce, in the matter of Metal Lath Specifications.

Mr. Sullivan W. Jones has been appointed to represent the Institute on the National Electrical Code Sectional Committee of the American Engineering Standards Committee.

Mr. Alexander B. Trowbridge announces the opening of new offices at 110 East Forty-second Street, New York City, where his practice will be limited to consultation service.

Mr. Gerald Kenneth Goerlings has been awarded the Henry Gillette Woodman Scholarship, University of Pennsylvania, for 1923. The scholarship provides for a year's travel in Europe and is open to the holder of a degree who completes at the University of Pennsylvania the requirements of either of its degrees in architecture (B. Arch. or M. Arch.). Mr. Goerlings received the Bachelor's degree in 1921 and the Master's degree from the Department of Architecture, U. of Pa., in 1922. He was awarded the Brooke Silver Medal in 1921 and the Brooke Gold Medal in 1922 for meritorious work in design, and the Faculty Medal in Architecture in 1921 for the highest standing throughout his Senior year.

New Members Elected

As of 26 December, 1923

Robert B. Crowe, *Montgomery,* ALABAMA; Samuel Lewis Malkind, Joseph A. McCarroll, *Brooklyn,* BROOKLYN; Harvey Storing Horton, *Buffalo,* BUFFALO; R. Bernard Kurzon, *Chicago,* CHICAGO; George Meredith Musick, Ernest Philip Varian, *Denver,* COLORADO; William T. Marchant, *Hartford,* CONNECTICUT; William Harold Butterfield, *Atlanta,* GEORGIA; Ralph E. Scamell, *Topeka;* Paul Weigel, *Manhattan,* KANSAS; Walter T. Vahlberg, *Oklahoma City,* KANSAS CITY; William P. Spratling, *New Orleans,* LOUISIANA; Harold Ward Barker, *Grand Rapids,* MICHIGAN; Ferman Roswell Barratt, *New York City,* NEW YORK; Samuel Grant Alexander, *Asheville,* NORTH CAROLINA; Carl de Moll, Benjamin M. Hall, John Craig Janney, E. William Martin, *Philadelphia,* PHILADELPHIA; John Rodney Tabor, *Houston,* TEXAS.

Obituary

Robert S. Roeschlaub

Elected to the Institute in 1889; to Fellowship in 1900
Died at San Diego, California, 25 October, 1923

Mr. Roeschlaub was born in Munich, Bavaria, 6 July, 1843, his family removing to the United States in 1846. He received his primary education at Quincy, Illinois, and on 19 August, 1862, he enlisted in Company E, Eighty-fourth Regiment of Illinois Volunteers, serving therein until the close of the war. He went through Sherman's famous campaigns and was twice wounded, at Stone River and Chickamauga, and was rewarded for his valor and services by promotion to a captaincy. He returned to Quincy and engaged in the practice of architecture, removing to Denver in 1873, where he continued in practice for forty years until ill-health compelled his removal to California in 1913. In 1875 he was appointed to the East Denver School Board, where he served until 1889, during which time he was continuously in the service of planning and erecting school buildings. He also designed many of the finer residences and business buildings of Denver and was likewise employed on many of the institutions of the State of Colorado.

James Driver

Elected to the Institute in 1913
Died at Boston, Massachusetts, 23 December, 1923

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL *jointly to give, in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus accord architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

Concrete Waterproofing (3b4)—(*National Lime Association Bulletin, No. 301. Size 6" x 9". Pages 20. Illustrated*).

Hydrated lime makes concrete watertight by a three-fold action. First, by reducing the probability of visible defects, such as honeycomb, stone-pockets and other weak sections; second, by reducing the size of the smaller voids; third, by acting as a filler in the microscopic voids.

It is a well-known fact that it is common practice to use too much water in concrete mixtures. This is done partly to make the mass more mobile and easier to handle, partly to make it appear thoroughly mixed, though the mixing time has been cut down, and often for no other reason than ignorance of the fundamental principles of good concrete.

The use of an excess of water causes the grout to run away from the aggregates and leave honeycombs, stone-pockets and other weak spots. An excess of water also causes the materials of which the concrete is composed to segregate and settle in strata, topped with a layer of laitance, which has no binding power whatever.

The water that is present in excess of that required for proper consistency and for chemical reaction takes up space. Portland cement requires a comparatively small quantity of water for setting so that all excess must evaporate, and in so doing leaves voids in the mass large enough for water to pass through. Microscopic investigations have demonstrated that a part of the portland cement is converted into laitance and distributed throughout the concrete. Neither porosity or laitance is conducive to the production of strong and watertight concrete. Tests made by the U. S. Bureau of Standards and other prominent laboratories have proven that, within certain limits, the strength of concrete is reduced as the quantity of mixing water is increased. This weakening effect is so marked that within the range of consistencies used in field practice the strength of the concrete may vary several hundred per cent.

Hydrated lime is the most plastic material of construction and for this reason it has been used for years in mortar, plaster and stucco. It is well known how easily it unites with water. After wetting it practically loses its granular character and is converted into a smooth colloidal paste that imparts smoothness and mobility to the concrete to which it is added.

On account of these lubricating properties concrete containing a small percentage of hydrated lime will slide through chutes of less inclination and for a longer distance than concrete without it, fill the forms more perfectly with less spading and surround the reinforcing steel more completely, thus serving as an effective rust preventive. All this occurs at a consistency where the paste or matrix is firm enough to keep both the fine and coarse aggregate in suspension and uniformly distributed throughout the mass, resulting in a more homogeneous, dense concrete with exterior surfaces of better appearance.

Besides eliminating the larger, or visible, structural defects, it reduces the size of the smaller voids through internal lubrication, which permits the particles of the aggregates to easily slide over and past each other, thereby causing them to range in a relative position, which is the most advantageous for maximum density, and finally even these pores of greatly reduced size are filled with finely divided colloidal material.

Thus it is seen that the important rôle of hydrated lime begins the moment it is brought in contact with the other materials and it would appear that its mission is fulfilled when its finely divided particles repose in the minute voids. But this is not the case. The water that is required to convert the hydrated lime powder into paste is held by it mechanically, and this mechanical affinity for water retards the evaporation. After the portland cement has used up, for its early hydration, the water with which it is in direct contact, it draws on the moisture held by the hydrated lime, and this serves to cause further hydration of the cement and the development of the colloid, which factors are of extreme importance for the increase of both strength and watertightness. This must be apparent to all who know how important it is to keep the hardened concrete well supplied with moisture during its early age.

It is a proven fact that, especially with the richer mixtures, the expansion and contraction of the concrete due to moisture changes is many times greater than that caused by temperature changes. This may be the explanation of the appearance of surface disintegration and other defects in concrete, in some cases, several years after it was placed.

The quantity used depends on the nature and size of the aggregates, especially the sand. With coarse, clean sand a slightly larger quantity may be used, while with sand containing a larger amount of fine particles, or even silt or clay, a smaller quantity may be sufficient. Likewise large-sized, hard and sharp crushed stone will require a little more hydrated lime than well-graded gravel.

Years of experience has shown the following proportions to give excellent results in making concrete watertight:

To 1-2-4 concrete add 10 pounds of hydrated lime for each sack of cement used.

To 1-2½-5 concrete add 12 pounds of hydrated lime for each sack of cement used.

To 1-3-6 concrete add 16 pounds of hydrated lime for each sack of cement used.

Since proportioning of concrete in the field is almost always done by volume, it is well to remember that hydrated lime weighs approximately 40 pounds per cubic foot and that an eight-quart pail holds approximately 10 pounds.

While the quantity of hydrated lime used for waterproofing concrete is often expressed as a percentage of the weight of the portland cement (assuming a sack of cement to be 100 pounds) in writing specifications there is less chance of confusion if, instead of expressing it as a percentage, the quantity is stated in pounds of hydrated lime to be added

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to the concrete mixture for each sack of portland cement used.

Thermal Conductivity of Concrete (30c3) — (*"The Thermal Conductivity and Diffusivity of Concrete." By A. P. Carman and R. A. Nelson. Bulletin No. 122. Engineering Experiment Station, University of Illinois. Pages 39. Size 6" x 9".*) The object of this investigation was to obtain the absolute thermal conductivity of a number of standard concrete mixtures. Only a few such determinations are recorded in the literature on the subject, and to a large extent these lack definiteness in regard to the composition and method of preparation of the material, so that it is impossible to make more than a very general comparison of the results here recorded with those previously obtained.

Units.—The results of the tests are expressed in terms of the following two units:

The C. G. S. Physical Unit of thermal conductivity corresponds to the flow of one gram-calorie in one second, when the flow is steady, through a section of a plate of the substance in question one square centimeter in area, the thickness of the plate being one centimeter, and the difference between the temperature of the faces of the plate one degree centigrade.

The British Engineering Unit of thermal conductivity corresponds to the flow of one British thermal unit (B. t. u.) in one hour, when the flow is steady, through a section of a plate of the substance in question one square foot in area, the thickness of the plate being one foot, and the difference between the temperatures of the faces of the plate one degree Fahrenheit.

Materials and Proportions Used.—In making the test cylinders "Universal" Portland cement and a dolomitic limestone sand and gravel were used. The aggregate used was mixed in the proportion, by weight, of 55 per cent sand to 45 per cent gravel. The cement and aggregate were mixed in various proportions from one part cement to two parts aggregate, by volume, to one part cement to nine parts aggregate. "Neat" cement cylinders were also tested. Three consistencies were used in the concrete mixtures, the normal consistency and two others with 10 per cent and 20 per cent additional water respectively. The cylinders were thoroughly dry when tested. The normal consistency was such that freshly molded concrete in the form of a cylinder 8 inches in diameter by 12 inches long, with a 1:4 mix, would slump ½ inch to 1 inch when the form was removed. The marble tested was White Alabama, described as a "very good grade" of marble.

General Conclusions.—Neat cement had a much lower thermal conductivity than any of the sand and gravel mixtures.

In the case of the sand and gravel mixtures, there is practically no difference in thermal conductivity due to the relative "richness" or "leanness" in cement of a mixture. The voids in the sand and gravel concrete mixture range from 16 to 20 per cent, while in the case of neat cement the percentage of voids is about 42. It seems probable that the proportion of solid material to voids to a large extent determines the conductivity. The thermal conductivity of a stone, like marble, is much greater than that of a concrete mixture.

As far as consistency is concerned the maximum thermal conductivity occurs with a relative water content of about 110 per cent; for relative water contents of 100 or 120 per cent the thermal conductivity is generally lower.

Age has little if any effect on the thermal conductivity of concrete. If there is any change there is a slight decrease in thermal conductivity with age, but this is small and may be due to very small changes in absolute moisture.

There is very slight, if any, change of conductivity with change of temperature for concrete; for marble, there is a marked decrease in conductivity with rise in temperature.

Dry Kilns (19a32)—*(U. S. Department of Agriculture. Bulletin No. 894. "Manual of Design and Installation of Forest Service Water Spray Dry Kiln." By L. V. Teesdale, Engineer in Forest Products. Pages 47. Size 6" x 9".)* This bulletin contains a description of the water spray kilns, materials and details of construction, heating and water supply, condenser, coils, control instruments and some of the points to be emphasized in specifications.

Principles of Kiln Drying.—The successful kiln drying of refractory wood is absolutely dependent upon the ability of the operator to control and maintain the three essential drying conditions—temperature, humidity, and circulation. Heat is required for evaporation of the moisture; a circulation of air is necessary to carry the heat from the heating coils to the lumber and to carry away the moisture evaporated from the wood; and the relative humidity controls the rate of drying from the surface of the lumber.

Temperature.—There are two definite reasons for accurately controlling the temperature; (1) Many species of wood have very exacting temperature requirements for successful drying, especially while green; and a relatively slight departure from the desired temperature may result in damaged stock. As the drying progresses, however, relatively higher temperatures can be used without causing damage, and usually fluctuations in the temperature at this time may occur without serious damage. (2) Any increase or decrease in temperature not under the control of the operator, or a difference in temperature at opposite ends of the kiln or in different parts of the pile, will affect the relative humidity, and the drying will not be under control.

Humidity.—In the process of drying the surface of a piece of wood becomes drier than the interior, owing to the resistance of the wood substance to the transfusion of moisture. If the drying occurs in hot, dry air the moisture difference between the surface and center portions of a given piece becomes very great. The surface tends to shrink more than the center, with the result that the stresses which develope cause warping and surface checking in the early stages of the run and honey-combing and permanent case-hardening during the final period of drying. To control the drying, therefore, the operator must be able to maintain any humidity desired, independent of the temperature.

Circulation.—Evaporation requires heat. Air is the medium used for conveying this heat to all parts of the lumber pile and for carrying away the evaporated moisture. The circulation must be positive and ample throughout the pile and reasonably uniform in order to produce equal distribution of heat and humidity. A sluggish circulation means slow drying; stagnant air means no drying; and unequal circulation means unequal drying. This is especially significant in the case of green lumber.

Principles of Operation.—In a water spray kiln the air entering the lumber pile is controlled as to the maximum temperature and minimum humidity desired. As the air comes in contact with the moist lumber, it absorbs moisture, which causes a drop in temperature and an increase in humidity. Thus the temperature of the air is somewhat lower and the humidity higher when it leaves the pile than when it enters.

To remove the moisture that has been taken away from the lumber, the air is cooled by passing through the water

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sprays. The air leaving the spray chambers is saturated at the dew point of the air entering the pile. During the passage of this saturated air over the heating coils the temperature is raised and the relative humidity thereby is lowered. From the heating coils the air passes to the lumber again at the original temperature and humidity. The cycle is thus repeated.

The temperature of the air as it leaves the spray chamber through the baffles and hence the amount of moisture it carries along is controlled by the temperature of the water admitted through the sprays. The temperature of the spray water itself is controlled by a thermostatic water-mixing valve, which automatically mixes warm and cold water to maintain the desired constant temperature condition; or in certain cases the automatic mixer is made unnecessary because the water may be held at the desired temperature in the well by admitting cold water with the spent water returning from the sprays.

The heating coils are usually controlled by a thermostatic valve placed on the steam supply. The controlling bulb of the thermostat is placed on the entering air side of the lumber pile in which the temperature is to be controlled. The coils are divided into a number of units which are properly valved to be operated separately or together, according to the kind of material to be dried and the temperature required.

Chemical Fire Extinguishers (29e3)—*(Farmers' Bulletin 904. U. S. Dept. of Agriculture. "Fire Prevention and Fire Fighting on the Farm." By H. R. Tolley and A. P. Yerkes. Size 6" x 9". Pages 16.)* The chemical extinguisher in most general use is the soda-acid variety with a capacity of about 2½ gallons of water. An extinguisher of this kind consists of a closed metal tank strong enough to withstand considerable pressure and partly filled with a solution of bicarbonate of soda (baking soda). In the top of the tank is a bottle of sulphuric acid, which is closed by a loose-fitting lead stopper. The only outlet to the tank is a rubber hose equipped with a nozzle. To operate the extinguisher the tank is simply turned bottom upward. This permits the sulphuric acid to escape gradually around the stopper, which drops out against the top of the tank. The acid comes in contact with the soda solution; carbonic-acid gas, which produces great pressure, is generated, and the water and gas are forced out through the hose and nozzle. Both the water and the gas, which is noncombustible, assist in extinguishing the fire. The chemical extinguishers which are approved by insurance companies are tested to withstand a pressure of 350 pounds. They are designed to hold 2½ gallons of water mixed with 1½ pounds of bicarbonate of soda, and the bottle holds 4 ounces of acid. The stream which is thrown at the blaze has a range of from 25 to 40 feet and will flow for about one minute. These extinguishers can be refilled and used many times. When not in use they require no attention, except that they should be discharged and thoroughly cleaned and refilled once a year, and must be protected from freezing. These extinguishers are useful on any fire which water will quench, but are not very effective in gasoline or kerosene fires.

Another type of chemical extinguisher consists of a quart of fluid in a double-action metal syringe, the handle of which is worked back and forth to eject the liquid. The chemical agent which smothers the fire is carbon tetrachloride. This is a liquid which does not freeze until a temperature of 50 degrees F. below zero is reached. When the temperature rises to about 200 degrees F., very nearly the temperature required to boil water, it turns into a heavy vapor, which covers and smothers the fire. It is especially useful in extinguishing fires on which water or carbonic-acid-gas extinguishers have little effect. Burning oil, gasoline, kerosene, or acetylene generally can be subdued with it and it is especially valuable in the garage. It is not poisonous and evaporates quickly without damaging articles on which it is thrown. However, a large quantity of the vapor may cause suffocation of persons remaining in a closed room with it. Caution in its use is therefore necessary.

Dry Powder Extinguishers.—There are on the market many makes of extinguishers consisting of sheet-metal tubes filled with powder, which decomposes when thrown on a hot fire and produces a noncombustible gas which smothers the flames by shutting off the oxygen. The manufacturers recommend them for fires in confined spaces, and especially for chimney fires, and in many cases they have been effective in curbing gasoline and oil fires. The ingredients are coarsely powdered, decompose easily without explosion, and give off a strong odor and much smoke. They appeal to many on account of their low cost when compared with other extinguishers, but their value has been greatly exaggerated and most experts in fire protection do not recommend them. Their use in attempts to extinguish fires on which they can be of little help is likely to cause disastrous delay in the use of water or other approved agents.

"Hand Grenade" Extinguishers.—Glass bottles of spherical form containing fire-extinguishing liquids of various kinds are sold in many places. The bottle is to be thrown on the fire and broken and the liquid thus liberated. When heated the liquid gives off a noncombustible gas, and in some cases is supposed to encrust the burning material with a fireproof chemical and thus smother the fire. These grenades are not as dependable as other forms of extinguishers. Their capacity is small, it is difficult to throw one of them to the base of the fire, and sometimes they do not break when thrown. As in the case of the tubes of dry powder, they are likely to cause serious delay in the use of better extinguishing agents.

Plating Solutions (15e)—*(Zinc Cyanide Plating Solutions. Technologic Paper of the Bureau of Standards No 195. Pages 19. Size 7" x 10".)* During the war there was a great demand for information upon zinc plating or "electro galvanizing," as it had been shown that zinc coatings furnish by far the best protection against the corrosion of steel. Two types of zinc plating solutions have been used commercially, namely, the sulphate and cyanide solutions. Comparative experiments have shown that satisfactory deposits can be obtained from both sulphate and cyanide solutions, but that the latter possesses the properties of "throwing" the deposit better upon irregular-shaped articles. The paper contains a highly technical description of the general principles, the preparation of solutions, analysis of solutions, and operation of solutions.

Hog Houses for Nebraska (351)—*(University of Nebraska, Agricultural Experiment Station. Circular No. 14, by O. W. Sjogren and I. D. Wood. Pages 20. Size 6" x 9". Illustrated.)*

The material contained in this bulletin is a culmination of several years' study and investigation of the different types of hog houses used in Nebraska. It is realized that the plans given will not suit all conditions that may arise, but an effort has been made to bring out the essential factors so that the plans may serve as a guide in planning a house suited to particular conditions.

Synopsis. The essentials of an ideal hog house; the location of the hog house; foundations; floors; partitions and

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fastenings; guard rail; outside doors; roof windows; heating of hog houses; individual house versus colony house; North and South colony house—hog house 10.72-14; North and South colony house—hog house 10.72-51; bill of material for North and South colony house; South facing colony house—hog house No. 10.72-53; bill of material for South facing colony house; large colony house for pure-bred breeder—hog house No. 10.72-50; individual hog house—No. 10.72-49; bill of material for individual house.

Hog Houses (351)—*U. S. Dept. of Agriculture, Farmer's Bulletin 438, by J. A. Warren. Size 6" x 9". Pages 24. Illustrated.)*

Synopsis. Need of shelter for hogs; cost of housing pigs; varieties of hog houses; examples of faulty construction; two well-built hog houses; a combination hog house with hay and grain storage rooms; two types of cheap houses; hog cots or individual houses; hints on construction; where to place windows; sunshine tables.

Feed, Amount Used by Farm Animals (351)—(*An economic study of dairying on farms in Broome Co., N. Y. Bulletin 409, Cornell University Agric. Exp. Sta.)*

POUND FEED USED PER COW PER DAY

	Pasture period	Winter period
Grain	.856	6.007
Silage	.471	18.110
Other succulent feed	3.359	1.471
Dry forage	.084	20.141

The Farm Layout, How to Plan (38)—(*New York State College of Agriculture, Cornell University. Extension Bulletin 55, by W. I. Myers. Pages 34. Size 6" x 9". Illustrated.)*

This bulletin indicates the importance of and the factors to be considered in rearranging farm layouts to permit efficient use of labor saving machinery.

Synopsis. Why many New York farms need rearranging; important factors in planning a good farm layout; actual rearrangements made by owners of some New York farms; how to plan a farm rearrangement.

Lime Stucco (21d3)—(*Continued from the January issue.*)

The details of general construction include the following essential points of good stucco design: Overhangs, cornices and the like detail to prevent any water from reaching the top or getting back of the stucco.

Parapet walls should have wide copings and water-tight joints, and, under the copings, irrespective of their materials, place metal flashings to form a drip.

The tops of chimneys should be treated with a projecting course with drip, and, if jointed, flashed as mentioned for copings. The connection with the roof or building should be flashed.

Flash over all door and window openings, wherever projecting wood moldings occur.

Continuous sills should have large overhangs with drips cut on the under side; or, if of brick or otherwise jointed, flashed similar to copings. All sills should have stools, and lugs, or seats to receive the stucco jambs, or if of wood should have metal stops on the end or be cut out at the back to be entirely clear of the stucco face.

Stop all stucco not less than two to three inches above any roofs, promenades, or decks and terminate upon flashed wood strips or upon other projecting bases.

Avoid whenever possible stuccoed copings, cornices and other exposed horizontal surfaces. Any horizontal courses, bands, or other projections should be flashed on the tops, or washes, and should never slope less than one inch in two inches.

Place fasteners for rainwater conductors, supports for gutters, and other permanent fixtures previous to the application of the stucco.

Terminate stucco upon a base of stone, brick, or other suitable masonry, eighteen inches above grade as a minimum distance, to prevent discoloration from splashing rain as well as to minimize the effects of dampness from capillarity. A continuous damp-coursing of slate or of bituminous materials is recommended in masonry walls just below the starting line of any stucco, close to grade.

Walls of brick, hollow building tile, or concrete should be clean and present a good mechanical key or suction bond for the scratch coat. Possible settlement of walls should be thoroughly investigated and prevented as far as possible. Lintels or arches should be of the same material as the backing wherever practicable, and any which are of wood or metal should be thoroughly metal lathed with the lath extended well onto the backing.

Lathing fastened to masonry or to the skeleton construction of a structure to form the key for the stucco may be either of wood or metal and must be firmly secured in order to withstand the necessary pressure for applying the stucco.

The recommendations of the American Concrete Institute state: "Waterproofing materials of any type should not be necessary in properly mixed and applied cement stucco. Stucco will absorb water to some extent in rainy weather, but this is not injurious."

The opinions of those who have had wide experience with lime stucco indicate that the above statement holds equally true for lime stucco.

"Water-marking," or the outlining of structural units by dark lines due to moisture retained after a rain, is largely due to difference in absorptive powers of the backing. If the backing is composed of units of nearly the same absorptive power, this difficulty will not be encountered. Any backing should be thoroughly wet, before stucco is applied. This will tend to bring all units of the backing to the same degree of dampness, and when the stucco is applied conditions will be more constant.

Synopsis.—Historical Resume, Modern Lime Stucco, Interesting Examples of Modern Stucco Work, Basic Specification for Lime Stucco, Notes on Basic Specification, on Overcoating, Quantities, Weights, and Measures.

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THE JOURNAL OF THE
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Towered Cities—III

Carcassonne and Avignon

Photographs by E. H. Lowber

IN THESE informal commentaries and memories concerned with Spanish towns, how, it may be asked, should Carcassonne and Avignon be taken into account? Two reasons might be reckoned in reply: first, that the south of France and the Spanish March are all of a piece, that on both sides of the Pyrenees and all around the Gulf of Lions, where the Visigothic kingdom was established, one race is found, one art, one speech, and very often in the Middle Ages one ruler; secondly, that the precise point at which our investigations are arrived, namely, the debt of the Limousin lands to Eastern builders, could be proved here neatly. The great families of Languedoc and Provence were established also in the East. But in truth all this west-Mediterranean building has already been cited in one article or another: one time a gate at Cagliari, again a gate at Avignon; and all this debt to Antioch and Tortosa, to Kala'at el Husn and Kala at Sahioun and Safita has been claimed and taken for granted, alike for castles and for fortified towns, and the matter may as well be now presented for consideration.

A short exposition will suffice to prove what is asserted, but the immortal memory of these cities, once evoked, cannot lightly be laid. At Carcassonne culminated in the twelfth century the brutal invasion from the north which was called the Albigensian crusade and which was a political and commercial scheme to wreck and ruin, in the south, a political and commercial rival of Paris; and from Carcassonne derived his lordship and seigneury Simon de Montfort. At Avignon in the fourteenth, Limousin popes reared gloriously the only mediæval palace which could bear comparison with the Alhambra, and adorned it with the help of Provençal workmen, and Italian and Catalan.

The fortifications of Carcassonne are perfect and intact; the larger and lesser towers that guard the angles and the intermediate curtain, the outer and the inner line of walls, the space between them that is called in French *les lices,* the lists, where knights were used to joust in peacetime and refugees to drive their cattle in raids or sieges. Here may be studied the perfect model of a walled city, hill-set; the heavy earthworks beyond the moat, the huge cylindrical towers that rise from it along the curtain, those of smaller girth that flank the portal, between which the portcullis and its counterpoises run in a gash and two grooves in the masonry; the steep little stair on the wall that a single man could defend, the long curved *rampe* of cobblestone that gave access to the city's inner gate, as just such another had led up to the citadel of Tiryns, three milleniums before the French king finished strengthening his captured mountain-hold.

The Romans and the Visigoths had walled and entrenched and scarped the abrupt hill, then in 1130 the Viscount Athon rebuilt with all the science learned by Crusaders in Palestine. The Armenians, says William of Tyre, had taught the Crusaders military engineering.

These mediæval Armenians were notable architects: when the Armenian Bedr-el-Gemaly, about 1074, was pacifying Egypt he fortified Cairo and built three gates in 1087, for which he summoned three brothers, Armenians and architects, from Edessa. There they had learned their craft in the great Byzantine tradition, for the Emperor Justinian had fortified that city, with the rest of the frontier. Procopius devotes a long section to describing the operations at Edessa, but the best account of a fortified city in the *Six Books of the Buildings of the Lord Justinian* is that of Dara, with which he opens. There was, as we make out, a triple series of defenses: two strong walls, each furnished with an interior *chemin de ronde,* and flanked by battlemented towers of three stories, which were vaulted,

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and topped by a flagged platform behind the loop-holed rampart. Then an advanced wall covered the approaches, that had towers at the important points; lastly, a ditch, wide and deep, was flanked by a parapet of earth and masonry. The walls were thickened in the lower part, forming a steep glacis between tower and tower: they were thirty feet high, and at Dara carried, apparently, a double *chemin de ronde,* the lower supported on buttresses or corbelled out from the wall, the upper laid out on top of the wall and screened by battlements. At Constantina (which is now Vahr-an-Scheher, in southern Armenia), Procopius says the approaches to the towers were covered, which may mean that the passages ran under and through them, as at Lemsa in the north of Africa and at Almodovar del Rio near Cordova: in any case this ashlar building of passages, battlements and machicolations is unlike as possible to the fragile and inflammable wooden *hourdes* that topped the castles of England and the Isle of France. At Dara, we are further told, the space between the battlements was reduced to the dimensions of small loopholes, the old open towers were encased in others, rectangular, of great strength, and vaulted; finally, the river—which was both a necessity and a menace—was dammed a little higher up, with a series of graduated openings for flood-water, and brought down through the town in a channel of masonry. About ten or fifteen years ago the French General de Beylié, returning from Burmah to France overland, stopped at Dara to photograph a curious fortified dam that caught his eye. That it was of Justinian's building he seems not to have grasped. These operations of the great emperor were devised by Chryses of Alexandria and approved by his two chief architects, Isidor of Miletus and Anthemius of Tralles: but when the dome of S. Sophia collapsed a few years later it was rebuilt more scientifically by Tiridates the Armenian. On the other hand, when an architect was needed for the royal foundation of Akthamar, in the Lake of Van, early in the tenth century, King Gagik found one in Manuel the Roman, i. e., from Byzantium.

Byzantine building was based on the imperial Hellenistic art of Asia Minor, Syria and Alexandria, and it determined the later art of these regions, of Greece, of Armenia: the Arabs learned it. The Crusaders, settling in Syria, learned not only from brown workmen bought or borrowed but also from what they saw. For instance, Justinian's defenses of Antioch were repaired by the Arabs twice, once before and again after the Crusaders had held there a Principality, and are still to be studied among the mountain gorges.

The Crusaders brought home, or sent, their new science to their own lands on the Mediterranean, on the Rhone, the Garonne, the Dordogne, the Lot: the thirteenth-century walls of Cahors, like the archbishop's palace at Narbonne and the pope's palace at Avignon, both built entirely in the fourteenth century, show a system identical with that of Dara and Vahran-Scheher; one which was used likewise when the Syrian Karak of the Knights was built in the thirteenth century, though parts had fallen when Miss Lowthian Bell photographed it in 1906. In all these cases the parapets, with wide machicolations, overhang superbly, and are carried on mighty arches corbelled up from the curtain wall. The same feature may be observed at the castle of Coca,[1] which Arab master-masons built for a Fonseca in Castile in the fifteenth century, where the wavy lines of curved and jutting brickwork flicker and shiver, rose-colored and peach-colored, like sheets of living fire. It is quite possible that the lords of Provence and the masons of Avignon had learned their style from Arabs before the First Crusade, for we know that in the eighth century they went on record as hating the Saracen less than the Frank.

The civilization of what we call the south of France in the twelfth century was perhaps the most beautiful and perfect that western Europe had ever known, since the richest midsummer flowering in Sicily was to come a little later, and the earlier incomparable spring-tide outburst at Cordova was not quite European. At the courts of Poitou, of Toulouse, of Provence, in the castles of all that splendid southland that, like a single almond orchard in flower, burst into a flush of song, from the hills of Dauphiny to the Atlantic sands and almost from the Loire down to the Pyrenees and across them, life was an enchantment. There men's lives were suffused with spiritual passion, and love and death made love the deadlier and death the lovelier. There Jaufre Rudel and Bernard de Ventadour and Arnaud Daniel were to sing their lives out, wandering from land to land, from castle hall to castle bower, across the sun-smitten land; and the Countess of Die and the Count of Orange were to sing antiphonally to one another like two nightingales in the cypresses of a garden. There Peire Vidal loved the Loba of Penautier, who was the Lady of Carcassonne; and for love of her clad himself in wolfskins and was hunted by his own hounds over the hills like a wolf, that he should be Lobo if she were Loba; so she found him torn, half dead, and laughed softly, and kissed him, and healed him of all his wounds. There the splendid and mysterious beauty of Romanesque architecture, of S. Sernin at Toulouse and S. Trophime at Arles and Montmajour among the marshes and meres of a desolate country, arose like the walls of Thebes to the sound of music; there the magical and troubling loveliness of Romanesque sculpture, at S. Gilles and S. Etienne and La Daurade, was evoked like dreams made visible; and worn and ruinous and wasted though the statues may be, and carted away to museums like prisoners in tumbrils, their beauty haunts the heart.

[1] See JOURNAL of August and September, 1921.

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CARCASSONNE—LES LICES

DEPARTMENT OF ARCHITECTURE
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The communes, meanwhile, had attained to a life hardly less splendid: Marseilles, Montpelier, Toulouse, Avignon and their rivals were, many of them, free republics, enriched and softened by traffic with the gorgeous East. The formation of guilds and merchant companies brought about a change so rapid, says a historian, that it may justly be compared with our own industrial revolution. And when once relaxed the pressure upon the means of subsistence, men's thoughts turned suddenly toward all things high and holy: a spiritual reformation spread fast through all classes of society. The poor weaver found himself bidden to be a Friend of God; the Count of Toulouse carried about with him, through the waves of this troublesome world, the necessary provision for a like consecration when his time should come to die. It is not very easy to come at the truth where all the historians for seven centuries and more have been committed to concealing it, but with the help of good Charles Lea, the Quaker, the state of the case may be made out somewhat as follows:

Tolerance was general in the south, was a matter of course. The local clergy and, in some cases, the monastic bodies were very frequently found sympathetic to the new religious movement; while the bishops, appointed from Rome and often absentees, were furious. The nobles and townsfolk were sympathetic likewise. Strange as it may seem to those who know only northern history, it appears that the great lords of the south lived on good terms with both cities and clergy. The monasteries and parishes combined to withhold their revenues from the Roman prelates. Meanwhile, the existence of tolls at city gates and feudal frontiers was a great grievance to Italian and French merchants. The Mediterranean commerce was indispensable to northern trade, but the merchants were competitors: if they could by one stroke be put out of business and the business preserved, transferred to northern hands, the merchants of Paris and Champagne and the north shore would have done well by themselves. Rome and France indeed combined to extinguish Languedoc and Provence. The chief cause, however, of what was shamefully called a Crusade was the bitter jealousy of France, of the north, the same bitterness which culminated in a fixed determination at Paris to ruin the neighbors on the east, in the twentieth century. Lea, writing in 1908 with no contemporary parallels before his eyes, describes an Allied policy toward Raymond of Toulouse identical with the Allied policy toward the Republic at Berlin: the imposition of conditions which were impossible to fulfil, and then of further penalties even more hopeless. Prejudged and foredoomed, nothing but his destruction lay before Count Raymond. The Council of Lavaur and the Congress of Versailles had the same tactics and the same intentions.

Simon de Montfort was sincerely pious: more fundamentally pious perhaps than Paul Claudel or Paul Déroulède; but he was quite sure God wanted whatever he wanted. He had set out on a crusade, but turned back before Constantinople was reached; not having secured a princedom in Achaia or Thessaly, he felt God owed him one in Languedoc. He took the south. Béziers having been made a thorough lesson of frightfulness, he saw to it that Carcassonne should not be harmed materially: the women and children being all slaughtered or worse, and the men all killed in fighting or hunted through the hills. Not in amorous foolery but in a serious intent that had the lust of property to urge it on, he became a Viscount and took his title from Carcassonne.

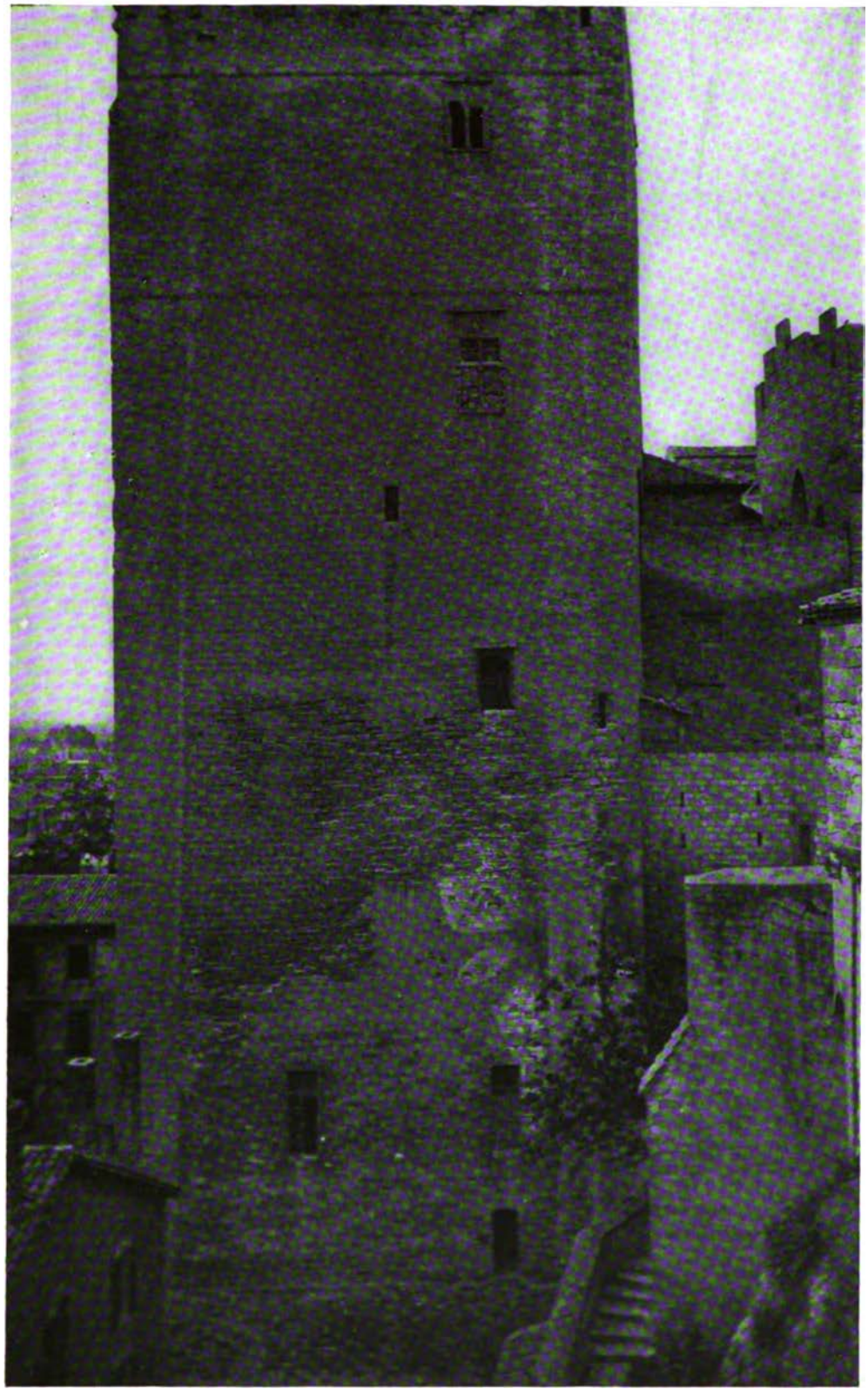
At one point the pope sickened and would have checked what he had set in motion; William of Tudela relates, with the skill of a trained writer, the scene at the Lateran Council of 1215, when Innocent III tried to acknowledge "right and reason" at last, and the prelates said: "Lord, if you do that, we are ruined." Nor could he do it.

A hundred years later there was no pope in Rome, but popes, selected and imposed by the will of French kings, were installed in Avignon for seventy years. They were all, it is pleasant to reflect, of the Limousin land: Raymond de Goth, John XXII the Cahorsine, a Cistercian from the Pyrennean county of Foix, an abbot from S. Victor of Marseilles, three from Limoges, and lastly Peter of Luna, a great lord and a tameless spirit from the kingdom of Aragon. The southern civilization held its own even through conquest and occupation. God's judgment sometimes is apparent: it was manifest in the fourteenth century on the Rhone. The beautiful town, seated and secure upon her acropolis above the river, avenged the old wrongs. All the realm of Christendom brought tribute; the ancient wrongers laid offerings at her gilded feet and went home despoiled, with poison in their veins.

Through all that fourteenth century, from the election of Clement V in 1305 to the election of Benedict XIII in 1392, the palace of the popes was building. The accounts, kept carefully, have been preserved, and we know more about it than about any other monument of the Middle Age.

Every tourist recalls the lofty square-angled mass of stone that from below in the steep street overtowers the hilltop cathedral. The jutting battlements, the wide machicolations through which pale sky is visible to one who leans against the walls looking straight up, the huge and angular towers, all in this southern style of fortification so unlike the castles of the north, leave a memory ineffaceable. For centuries the princely pleasurehouse was degraded into barracks, reeking of disinfectants and encrusted with whitewash: some

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CARCASSONNE—THE KEEP AND THE POSTERN STAIRWAY

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of the constituents of a standing army cut out the frescoed heads from chapel and closet and hall, to sell the neat painted disks of plaster to tourists, mostly English, as other constituents of a quartered army (aliens these, I believe) with their jack-knives picked out the mosaic from the cloister-columns at Monreale and had not even a price to show for the industry of idleness and ennui. After the military came the architects, the restorers, and what ignorance had happily neglected, learning and dexterity transformed. In the end, after a few centuries of weathering, the world will be grateful to the restorers. The echoing halls are vaster than the halls of dreams; the frescoed walls, reverently cleaned and left for deciphering, are piteous and fair; corridor and gallery, chamber and oratory and kitchen, show how nobly the first builders conceived them; towers and staircases and battlements are huger and more multitudinous than the imagination can compass today.

The bridge of Avignon was the greatest piece of engineering in the west since the Romans had passed that way and gone forever. It is broken now, but lasts on, immortally, in folksong. It had been planned and completed in 1188 before the storm broke; the builder was such another as Peter the Pilgrim, though he reached canonization, and his work has been rebuilt oftener. S. Bénézet, as he is called: S. Benet the Less, was a shepherd in the beginning and perhaps in the end a hermit, like that other architect of the twelfth century, S. Juan de Ortega; where he built bridge and bridge-chapel, the happy folk could dance.

The principal architect of the palace was John of Loubières, active 1342-1348: he was a carver by avocation, and I suppose a mason. The masons and carpenters engaged upon the work were mostly townmen of Avignon, and the same man worked on year after year, and brought his kindred. For instance, in 1337, Pierre Folcaud, with Jean Chapellier, was working under the architect Bernard Canello, on the chamber of Benedict XII: as late as 1357 this Folcaud was still employed. There is a Jean Folcaud also engaged in the following year, and Pierre and Bertaud Chapellier appear, the latter probably a son, for the entry falls twenty years after that contract with Canello. Master Bernard of Avignon is mentioned in 1339, probably Bernard Ganiac; and John English, a mason, lived and worked alongside him. These names, it must be admitted, are more tentative than one could wish, for the accounts which were kept in Latin and published in French furnish a sure disguise, usually, for men of other nations. At least two Catalans are mentioned by nationality, and in the further case of Pierre Dupuy, the master-painter engaged in decorating the earlier parts of the palace for some time before 1336, I am far from sure that he is not in reality another Catalan called, belike, Pere Despuig. The name is common on the east coast, at Valencia and Barcelona, in a region where painting was more advanced than in the central mountains of France. Most of the other painters, like the jewelers, are Italians, the latter chiefly Florentine or Sienese, the former from Arezzo and the papal city of Viterbo, as well as from the two great Tuscan republics.

Greatest among all the craftsmen was a certain Simon, the son of one Martin, who was called to decorate the palace and died there, leaving the unfinished work to nephews. Before he died, however, he had painted the portrait of a fair and virtuous dame of Avignon, at the request of a friend of his, a humanist and poet, who loved the golden-haired lady throughout a long life, and who rewarded him with two sonnets in thankfulness and praise. It was no small guerdon, for during the long centuries when the Primitives were ignored by an ungrateful world, and Siena was overlooked by dull or dissipated northern travelers on the grand tour, the sonnets of Petrarch were like a little lamp before the unforgotten image of Simone Martini.

GEORGIANA GODDARD KING.



THE WALLS OF CARCASSONNE

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CARCASSONNE—THE GATE, PORTCULLIS RAISED

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Eight Old Long Island Houses

Photographed by G. H. VAN ANDA

ON BLACK STUMP ROAD

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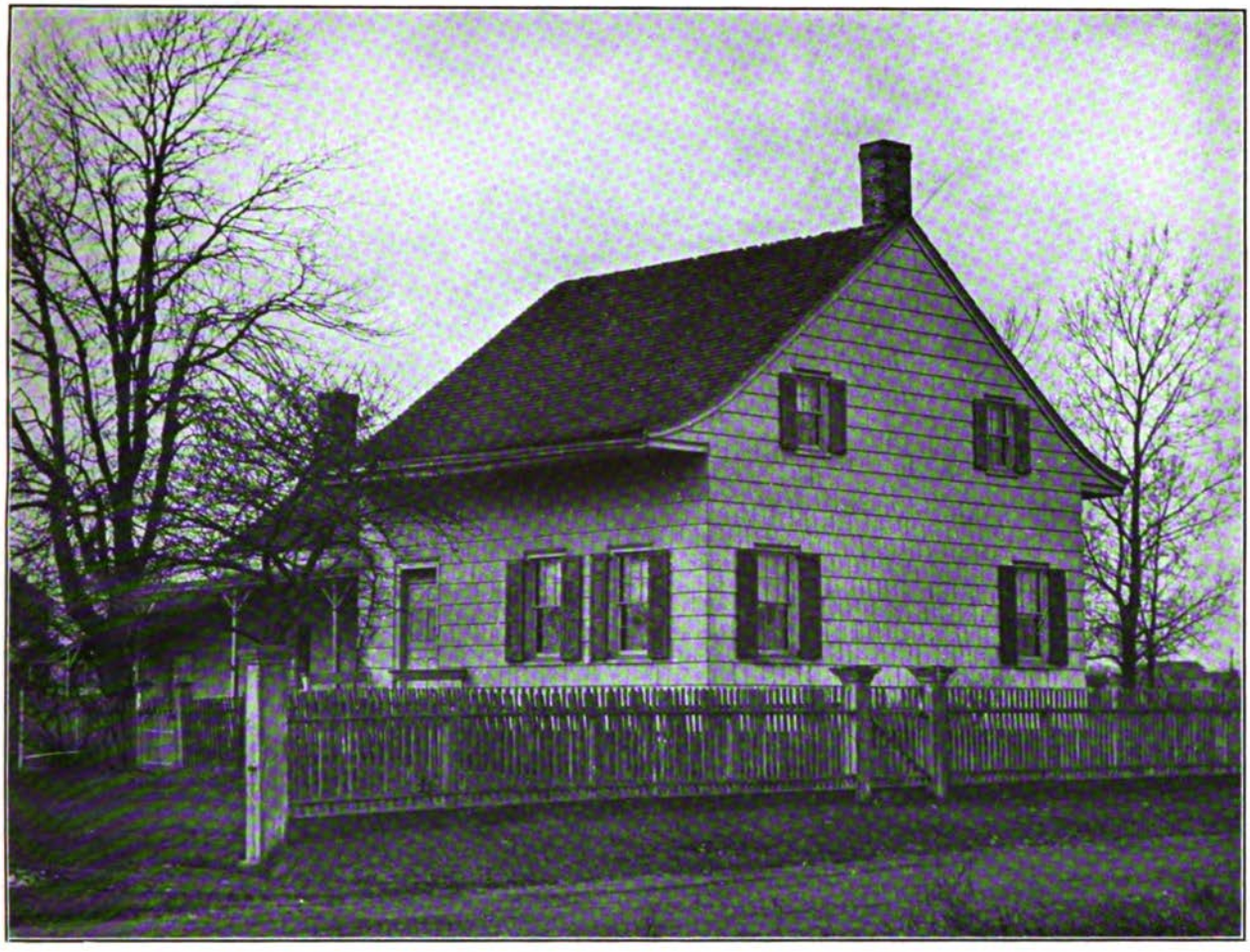
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FLATBUSH—NECK ROAD

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MILL ISLAND

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PENN VALLEY, LOOKING NORTH, KANSAS CITY. GEORGE EDWARD KESSLER, *Landscape Architect*

In Memoriam

George Edward Kessler

On March nineteenth of the year 1923 there died in the city of Indianapolis, and in harness, as he would, I am sure, have wished, a great and modest man, known to over forty cities and communities of the West and Middle West as a city planner and landscape architect of extraordinary insight, vision, and practical ability, the friend and leader toward beauty of the lowly and the highly placed alike, a diplomat who won his points and kept his friends, a simple, genial, gentle man—George Edward Kessler.

Kansas City had, just before this great bereavement, in celebrating the thirtieth anniversary of the foundation of her park system, commemorated also the thirtieth anniversary of Mr. Kessler's connection with it. Parent and child, they grew up together. It is natural for artists to give the major credit to the creative genius and it is as the creating artist that we name him parent here. August R. Meyer, W. R. Nelson, and D. J. Haff were its godfathers, its sponsors in baptism. At a time when there was scarcely a paved street in Kansas City, when there were farms in the city limits, when one had to go down the road but a little way to find oneself in the open country, these prophets and seers of their city's future growth began to urge the creation of a park system "upon the farmers," as I have heard it phrased. Kessler saw the possibilities of the stream bottoms as parkways, with all their implications of easy gradients for roads and paths, and their adaptability as links in a chain of parks that would distribute breathing places throughout the future city; literally take the parks to the people rather than force the people to travel long distances to the parks. By quiet, patient, persistent effort, by proving step by step the truth of their prophecies, by wise methods of land acquisition, condemnation, and distribution of taxes, these men won to their proposals

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THE CLIFF DRIVE IN SUMMER, KANSAS CITY. GEORGE EDWARD KESSLER, *Landscape Architect*

a constantly growing and strengthening support, until Kansas City feels today that her system of parks and boulevards is her very crown of beauty and so honors the artist who brought it into being that she asked that his body might lie forever in his old home, in some scene of beauty he had created for her.

The genius of the man for friendship, the modesty that never claimed his due, the self-sacrifice that gave all he had without thought of the material recompense, that tired him out in the service of two-score communities and brought him to the narrow house all too soon have been recorded in numerous tributes from all over the country. The East knew him by reputation chiefly, but that his profession recognized his eminence is evinced by the vice-presidency of the American Society of Landscape Architects he held at the time of his death. He was also one of the original members of the Commission of Fine Arts appointed by President Roosevelt.

He was so quiet and retiring that a list of the cities and projects for which he had acted or was acting as designer or consultant is startling. From Syracuse, New York, to the City of Mexico, from Longview in the State of Washington to Pensacola, Florida, and including cities of the rank of Indianapolis, Cincinnati, St. Louis, Denver, and Salt Lake—this is a mere indication of the range of influence of this apostle who carried his gospel of beauty even into the wilderness and the waste places of the earth.

I close this tribute to a lovable and loyal collaborator with an excerpt from the resolution of the Board of Park Commissioners of Kansas City by their President, Mr. William C. Scarritt, who knew him long and loved him well:

"We cannot estimate his loss. It will not do to say that others may not rise up and carry forward his work; but as our minds recur to his fidelity and the sincerity of his purpose and the elevation of his standards of civic needs, it will be our unanimous resolve to seize upon his faith in the future growth of Kansas City and to carry forward with the same exaltation of spirit that was his, dauntlessly, the wise work of city planning and municipal achievement, and to add our efforts to his work in promoting the glory of our beloved city."

H. VAN BUREN MAGONIGLE.

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"Age d'Or"—Entrance Gates Between Grand Salon and Hall. The Autumn Salon, Paris. *From "L'Architecture"*

Henri Favier, *Architect;* Max Blondat, *Sculptor*

From Foreign Shores

On the Cluttered Docks

Competitions and the satisfactions and dissatisfactions which follow in their wake; town planning; tenements; municipal mansions for the middle class; railway stations; war monuments; much of the commonplace and conventional and very little of the imaginative in architecture, make up the mass of stuff heaped upon our dock for inspection and from which I am expected to select a cargo for this, the tenth, voyage of that frail craft, my "paper boat." Skyscrapers and machine-made cities (on paper only, thank goodness) were left on dock for future disposal last time when other more vital stuff had filled to capacity our restricted space in the hold. In fact some of our last cargo was cast overboard by the stevedores and, let us hope, for some good and sufficient reason.

Material and Immaterial

The material at hand is not so difficult of treatment. It is the immaterial, if such topics as the discussion of competitions, their weaknesses and possible virtues, and human scale in design—both of cities and buildings—can be called immaterial, which is difficult to manage. Undoubtedly the second topic, scale, has a spiritual bearing and in this sense only is immaterial; while competitions, in that they are always thrusting controversial elements to the fore, cannot be ranked with things immaterial; though equally they cannot be considered as having any spiritual quality; not, that is, in an architectural sense.

Our British brethren, the English especially, are having unpleasant experiences with competitions. They are unpleasant enough anyway for all except the winner and the results may later be unpleasant for him. The *Architects' Journal* seems to be the medium through which the spokesmen, pro and con, find voice; and communications in the November and December issues will bear comment. I shall not name names, but will consider generally the principles involved in certain points in controversy. First a point of irritation lies in the fact that a single assessor so frequently passes on the merits of the designs submitted. This fact should arouse no criticism from one who had entered a competition after the announcement that there was to be but a single assessor, together with his name. Then it is too late, and too unsportsmanlike for a loser to enter objections. But objection is being made by many outside of competitors to the system which creates the single assessor, or judge, as we call him, on the ground that no single mind can fairly analyze and compare the numerous plans, and that fairness lay rather in the decisions of a majority of three or more assessors, who would constitute what we call a jury. In spite of the profound respect which I (naturally) hold for my own opinions and

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judgment, yet I do not feel that I could undertake the task of being sole judge in an important competition. Perhaps if I were a less timid creature I should feel otherwise. But I am certain, from my experience of single advisers and juries, that in the decisions of the latter lies the nearest approach to fairness. A jury can be more impersonal—more hard-hearted or no-hearted—and is apt to be. An assessor who has drawn up the programme and conditions is placed in an unenviable position when a set of plans submitted in competition, though otherwise ministering to the best interests of the owner, that is, presenting the best solution of the problem, violates fixed conditions of the contract; that is, the programme, which constitutes a contract between the owner and one who enters the competition. A jury has been known to throw out such a set of drawings on the ground that its acceptance would be not only unfair to, but would be a breach of contract with, the competitors who played "straight." In the case being aired in the columns of the *Architects' Journal,* the assessor is charged with accepting and premiating the offending design. I have known, nearer home, a professional adviser, acting as sole judge, to do what the English assessor is charged with doing. As one of the defeated competitors I was "sore" and it was only my perverted sense of decency which restrained me from going into court and having the award set aside and a new and fair competition reinstated. Any losing competitor has that right under the law—if he chooses to exercise it. But we poor simple architects are generally too "good natured"; and that is why we are apt to go wrong as judges. By the way, a certain assessor who sought to answer his critics was ill-advised in his suggestion that theirs was a case for Institute discipline. His, rather, was the case if he really premiated a design which did not conform to "fixed" or mandatory conditions of the programme. In most of the recent English competitions the results seem to me most disheartening. The designs are commonplace to a degree; as one of the losing English competitors remarks, "If the winning design was the best offered, then the offerings must have been poor indeed," or words to that effect. The designs appear to have been drawn by professors of architectural design or by second year students under their direction. There is no heart, no imagination, no feeling, no human quality inhering in any of the designs. In one or two of the competitions the winning designs are less stilted and forced and academically conceived than in the others, but none is overimbued with the human quality.

Human Scale

Mr. A. Trystan Edwards deals, in the September and October numbers of *Architecture,* London, with the problem of the human unit in architecture, especially as applied to the design of shop fronts. The key to the discussion lies in the following as to old Regent Street:

"The scale was perfect, for while the parts were small enough to keep us in countenance, the composition of the street as a whole could not but impress us by its extraordinary dignity. It was the kind of dignity such as only very great men have, a wealth of character which does not inspire awe but puts the humblest person at his ease."

That first sentence, modified, might well hang as an illuminated motto over every architectural designer's table: "The scale was perfect, for while the parts were small, the whole could not but impress by its extraordinary dignity." Had that sentiment animated our competitors and had our designers of street fronts and skyscrapers and even dwelling houses followed the implications of that text our cities would be more agreeable places in which to live; less nerve-racking and overpowering to the mere humans who are compelled to walk the streets or live



BUSINESS PREMISES, FRERE ROAD, BOMBAY
BHEDWAR & BHEDWAR, *Architects*

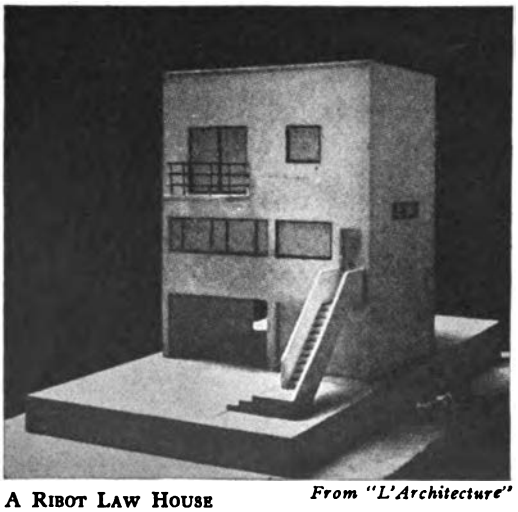
From "The Architects' Journal"

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in the houses or to spend hours in the shops, banks, theatres, or clubrooms. As Mr. Edwards says further; "The aristocratic and democratic ideals, alike forever necessary to mankind, came simultaneously to architectural fulfillment in Regent Street; and commerce had far more honor from this circumstance than it is likely to gain by its present attempt to repudiate both these ideals." We visualize here pretty definitely the meaning of the architecturally much used and abused terms "aristocracy" and "democracy." Democracy means the pulling together in harmony of the various individual elements, whether they be the features of the building or the buildings along the street. Aristocracy means the refinement of the elements, whether they be the features of the building or the buildings themselves. And more than this, there is implied a human scale, that is, a scale which does not overpower the human being who enters, lives in or gazes upon the buildings, neither depresses nor overawes him when he gazes upon the individual features or upon the whole building. We are getting away from that human scale in all our grandiloquent design. We conceive that we are giving expression to the aristocratic spirit when we design in the Grand Roman Manner with massive columns, exaggerated entablatures and mob-devouring arches, whereas we are in reality displaying our love of pomp and will to power which are not expressive of a refined and aristocratic feeling but which are indicative of a brutish and unrestrained nature.

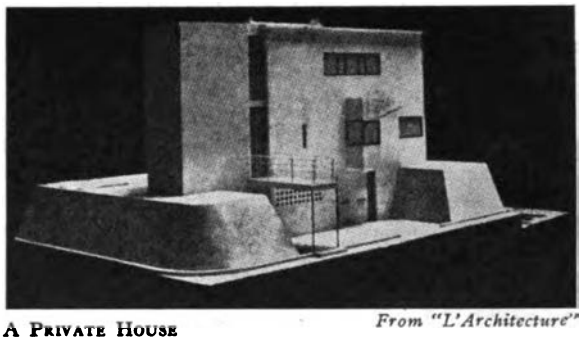
As to the Ornate

Nor does the present tendency toward overornamentation in any way ameliorate the conditions created by a non-aristocratic and non-democratic expression of a self lost in brutal immensity. Real refinement does not overornament. False pride almost alone is accountable for such manifestation. There is hardly a modern bank or theatre or hotel in which a person of refinement can feel at home. There is hardly a proscenium arch in a modern theatre which does not overpower stage, picture, and audience alike with its Roman orders of extreme scale, which are not refined, but which rather are vulgarized



A Ribot Law House
Le Corbusier, *Architect*

From "L'Architecture"



A Private House
Le Corbusier, *Architect*

From "L'Architecture"

by the tawdry and commonplace ornament so lavishly applied. Everywhere nowadays there must be unco-ordinated movement, must be scintillation, must be jazz, even in decoration. Repose and restful rhythm no longer seem to appeal; or if they answer to a call within us, that call is silenced by the strident voices of those who do not know when to stop—nor would seem to care to stop.

Paper Cities

It would seem that modern mankind had enough to suffer in brutalized scale and slathered ornament. But, no, it must be flattened out with the mechanically disposed planes and stages and box-like buildings of the ultra-modern city planners. Fortunately for us humans who still possess sensitiveness and feeling, these cities will never develop beyond the paper stage. Cities will not grow that way any more than mankind will develop into a breed of Robots. Better say that when mankind develops into Robots these mechanistic, cubistic, ultra-modernistic cities will materialize. Cities grow just as men grow. Certain habits appear, are altered and cast aside; certain tendencies caused by physical environment and by spiritual environment have to be modified and the environment itself changed. The efficient city like the efficient man must be a growth out of humanized conditions; and in this growth it gets sufficiently mechanized to suit all practical purposes without being squeezed in infancy or before birth between the flat unyielding planes of mechanical process. But in this jazz age of fierce and intemperate movement, with its ups and downs and roundabouts, perhaps it is not so strange that in some minds there should set in a reaction which should finally express itself in such schemes as that presented some time since in *L'Architecture,* Paris, and reproduced in part in my December cargo where limited space made comment impracticable.

From Far India

The 19 December issue of the *Architects' Journal,* London, devotes many pages of text and illustrations to the work of Messrs. Bhedwar and Bhedwar of Bombay. It is a good showing; but the work generally might find itself as satisfactorily environed in any English or American city of parts as in Bombay. In all but the business premises in Frere Road, Fort Bombay, reproduced herewith, and one residential block, we discern a Northern feeling. The railway terminal, also shown in illustration,

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FROM FOREIGN SHORES



From "The Architects' Journal"

ALEXANDRA DOCK RAILWAY STATION, BOMBAY
S. K. BHEDWAR, F.R.I.B.A., *Architect*

might be taken, in the mist, for the Kansas City Union Station, except that the American building is a bit simpler about the entablature, as might be expected. Lutyens and his co-workers got an Indian feeling into their buildings for the British Government in India; these native architects—I judge from the name and location that they are natives—have eliminated Indian feeling in favor of modern English. They, the Indians, have, however, been free and strong in their use of conventional Occidental forms. A later issue of this same Journal gives many illustrations of the rather satisfactory progress being made in the rehabilitation of Ypres. In this same number is presented the winning design for the Hull Art Gallery Competition. If I were a second-year man in some architectural school and had done it I might have patted myself on the back. But if I were a F.R.I.B.A. I should wonder if, after all, there were enough in architectural practice to make it worth while. Not a fresh thought nor a British thought in it.

Some Ways from Bombay

Construction, Canada, for December, 1923, reproduces drawings and photographs of the Edmonton (Alberta) Public Library. The central feature of this building violates general custom. It is rather the rule for a building to begin in a simple manner at the base and go to pieces at the top. The reverse is true, however, in this building, in which the structure seems to have suffered from a nervous disorder when it started out, and then pulled itself together and became calm, quite too calm. But it is something to pull one's self up after such a start as was made here. A technical school in the same issue has good qualities of plan and design.

L'Architecture, Paris, presents plans and elevations for the new municipally owned apartment houses to be let, at moderate rentals, to the middle class. I should like to reproduce one or two of the plans, but it is impracticable. I can find no sign of an elevator in these eight and nine story structures, in which sixteen or eighteen apartments use one stairway. That latter is not so bad, but think of the middle class or any other class being forced to walk up eight flights of stairs to reach home, at least to be *chez soi.* I'll warrant the dancing masters of France have developed some sturdy lower limbs among the middle and lower classes. Some good plans for tenement houses are shown in *Architekten,* Copenhagen, but cannot be reproduced.

A gem or two from *L'Architecture* we must not miss. So far as I am concerned, I am willing to let the illustrations speak for themselves; they are more eloquent than even I could be. These gems are from models displayed in the Autumn Salon, the entrance gates to which we reproduce. These gates will bear study; they would be perfect at the entrance to a watch factory. There is a lot of good material in these architectural papers—the fresh and crisp and attractive stuff being mostly domestic buildings. The public buildings are getting into a rut in the road to the commonplace; witness the North of Ireland Parliament Building, which might be taken, even in broad sunlight, for the Capitol of one of our own many æsthetically unenlightened States.

IRVING K. POND.



From "Construction"

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Housing and Community Planning

CLARENCE S. STEIN, *Associate Editor*

Higher Building in Relation to Town Planning[1]

There was once a great controversy which, I believe, profoundly moved the theological world of its day, if it did not even threaten the peace of empires, as to how many angels could stand on a needle's point. Today we look back with wonder, not perhaps untinged with some slight contempt, that serious people could have spent their energies in such a discussion.

But examining, as I have been constrained to do during the last twenty or thirty years, the attempts which mankind is making in various parts of the world to find out, not how many ethereal angels, but how many ponderous motor-cars can occupy the same square yard of ground at the same time, I begin to wonder whether the superiority of our intelligence to that of our theologically minded forefathers is as obvious as we should like to think!

Twenty or thirty years ago in this country it was generally assumed that great gains could be secured by overcrowding dwellings upon the land; that some dire economic necessity arising from these reputed gains compelled us so to develop our towns. That fallacy has now been pretty well exploded. Most of those who have examined the matter are agreed that, if people will, land can be developed at a density of 10 or 12 houses to the acre at little, if any, more, and sometimes at even less cost per house, than the same land can be developed for the same type of house at a density of 20 or 30 to the acre; that so far from gaining from overcrowding dwellings on land, such overcrowding yields less total return to the landowners, and affords a dearer plot for the occupant. So apart from other disadvantages, congestion of dwellings is really an expensive luxury. Unable to believe, however, anything so simple as that there is plenty of room for everybody, that it is crowding which causes most of our urban difficulties, modern business intelligence is now proposing to adopt vertical overcrowding. Unless we are careful, it will not be content without actual and disastrous demonstration that this particular form of overcrowding has even less to be said for it than the horizontal kind. The fact that this method has been fairly well tested in America; that it has created there urban problems of a difficulty exceeding anything which we know even in London; that 183 American towns containing 40 per cent. of the urban population have already adopted zoning ordinances, and that the remaining cities are hurrying after one another pell-mell to adopt regulations limiting height of buildings, as drastic as the vested interests already created will allow, does not seem enough to convince some of our urban theologians that many men cannot stand on the same flagstone at the same time, or more than one car move at one moment on the same piece of roadway. Nevertheless, in the hope that it is not too late to save our London from copying mistakes which New York, Chicago, and other American cities now regret, and the evil results of which they are now desperately struggling to remove, it seems worth while to examine the conditions prevailing in those cities, and to realize what would be the effect in London if we adopted the method of expansion upwards which the Americans are trying to check.

The arguments which can be brought against the adoption of high buildings are many and weighty. The law of diminishing returns applies to such buildings in almost all respects. With every added story the effective floor area per story is reduced, while the cost per square foot is increased; the greater proportional number of lifts required take their toll of space from each of an increasing number of floors. You do not dispense with transportation by going up; you merely change the horizontally moving omnibus for the vertically traveling lift, and make walking for even short journeys more difficult.

One witness before the New York Height of Buildings Commission calculated that the average time taken to reach the 30th floor would equal that of taking the subway express to a spot one mile distant.

The same law holds good as to light. Every story added tends to darken all the floors below. In spite of the bright light of New York, the number of dark rooms in which artificial light must always be used is far greater than with us. The consequent injury to health and loss of efficiency is said to be serious; eyesight is injured; tuberculosis and other diseases are encouraged. Much evidence was also given showing that high buildings lead to unstable property values. They unduly inflate the price of land and concentrate property development in small areas where the maintenance of values is very speculative, thus preventing a more widely distributed and stable improvement. The values of the lower rooms in adjacent buildings, whether themselves high or low, are depressed by the erection of higher buildings which diminish their light and obstruct their ventilation. It is true that one advocate of higher buildings gave as his reason the pleasure of living on the highest floors; but he overlooked the fact that the higher the buildings the smaller must be the proportion of people who can have the benefit of living at the top.

The conclusive argument against high buildings is that no real gain to the community is secured by adopting them. As hitherto used, they have so far deprived each other of light and air and so seriously congested the traffic in the streets as largely to destroy their own value and to deprive themselves of reasonably comfortable access, even if they could be spaced so as to allow proper light and air. If the streets could be laid out wide enough to carry their concentrated traffic without congestion, the total area covered would then be little, if any, less than that required to provide for the same community with buildings of normal height.

This more general or town planning aspect of the problem has acquired a special degree of urgency for

[1] Excerpts from a paper read before the Royal Institute of British Architects, 17th December, 1923. The reader will find it interesting to read this article in connection with "More Plans for More Chaos," which immediately follows it.—ED.

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us during the last few years, because we appear to be following another lead of our American cousins in regard to the extensive use of the private motor-car. We are following far behind American attainments, but still evidently following. In that country there are something like 12 million cars, or an average of about one car for every 10 people. There are several towns in which the number of cars registered has risen to one for every five of the population.

It is not yet apparent what will be the saturation point of ownership of motor-cars. Mr. Ford, who has contributed more than anyone else to the supply, does not consider that that point has been nearly reached; and I am informed that the industry in America is at the present time turning out approximately half a million cars per month. We in this country still number our cars in hundreds of thousands, and our annual output in tens of thousands. While we may hope we shall not reach numbers comparable with those in America, there is yet little doubt that our present number will expand enormously. It is increasing now at a rate approaching 25 per cent. per annum. We must therefore reckon with a rapidly extending use of the private motor-car as one of the conditions to be dealt with in future. There is little evidence that this condition will be accompanied by diminution in vehicles, such as the motor omnibus, which is already threatening to present one of our most serious traffic problems.

To understand the traffic aspect of the high building question it is necessary first to realize the extent to which an increase in the height of buildings affects the demand on street space. Fortunately this problem of height has recently been investigated with great care by the Chicago Real Estate Board, in connection with the fixing of height limits throughout that city. In their report they give precise data for buildings ranging from 5 to 30 stories, erected on one particular corner plot, including the net rentable floor space, cost, and other matters. There appears to be a fairly constant relation between the net rentable floor space and the total day population. I have checked it in connection with one or two individual buildings like the Woolworth Building in New York, and in connection with the whole Loop area of Chicago, and I find that a figure of about 45 square feet of rentable floor per head of population appears to be near the mark. To be safe, I propose to take 50 square feet of net floor space per head of total day population. It is quite simple to establish a definite relation between this population and the footpath area of the roads, and for this I have assumed that, to provide standing room, a space 2 by 2 feet is necessary for each person; and to provide for walking a space of 2 by 5 feet, although crowds walking along a footpath rarely average as little space as this. It is not possible to establish a definite relation between the road surface and all the various vehicles required to serve buildings of different height; but as we have in America a fairly reliable relation between population and the number of motor-cars owned, it is easy to establish a relation between the floor space of the buildings and the road space required to accommodate these motor-cars, which is sufficient for my purpose. The average over-all length of a number of motor vehicles is 20 feet; allowing a little space for the cars to stand clear of each other, about 24 or 25 feet is as little as can be allowed for each car. I have assumed that the cars occupy a width of road space varying from 7 feet 6 inches to 8 feet, according as the carriageway most nearly divides up into a certain number of car widths. These densities of occupancy of foot-

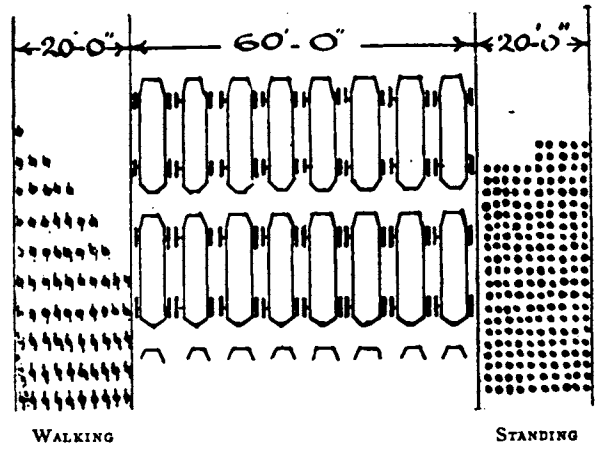


DIAGRAM 1—DENSITY TAKEN FOR CARS AND PEOPLE

way and road are illustrated in Diagram 1. The building taken for comparison of different heights was designed for a corner plot in the Loop area, 160 by 172 feet, with a rear alley. With five stories this building would have a day population of 2,018, and taking the average width of the roadways in the Loop area, which is about 86 feet, and the footway in front of the building as one-fifth of this, or 17 feet, the people occupying this one building would take up 504 feet of footway, standing; and 1,260 feet, walking. The average speed of people walking on the footway in a crowded condition comparable to this would be 224 feet per minute, so that this length of 1,260 feet of footway would be occupied for 5½ minutes before the occupants of this one building could pass away. If the building were increased to ten stories the population would not be doubled, but would be about 3,704, and the length of footway to accommodate this number walking would be 2,315 feet. The passing time in this case would be ten minutes. With twenty stories the figures would be—population accommodated, 6,930; footway occupied, 4,330 feet; time to pass, 20 minutes. Above twenty stories, owing to the large amount of floor space occupied by lifts on the lower floors, the increase of available space in proportion to the number of added floors becomes steadily smaller; at thirty stories, instead of a floor space enough to provide for 12,114 persons, the population would be only about 9,368; the length of footway occupied by even this number would, however, be 5,853 feet, and the time required for the people to pass a given point nearly half an hour.

Turning now to the conditions in the carriageway, it is safe to assume in America that the class of people forming the day population in city buildings, including a minimum proportion of children and others not owning cars, will at any rate own the average number of one car

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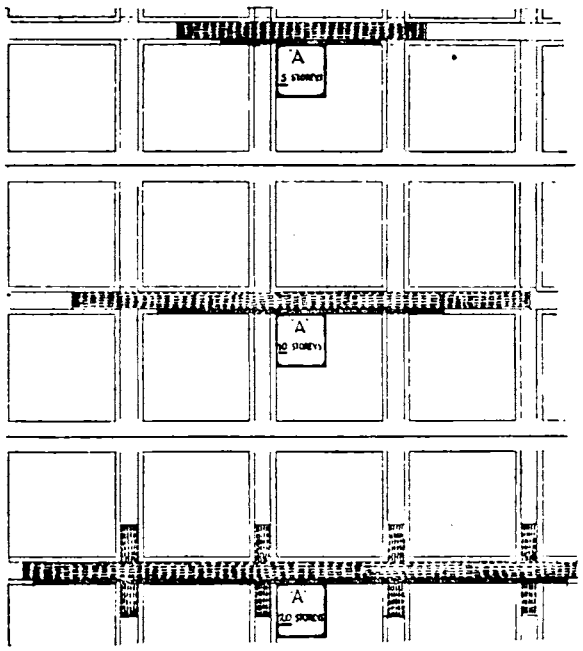


DIAGRAM 2.—STREET AREA REQUIRED FOR POPULATION OF BUILDING "A"—STANDING; AND AVERAGE NUMBER OF CARS OWNED BY OCCUPANTS. "A" SHOWN IN THREE HEIGHTS.

to every ten people. If these cars were to attend at the building to bring people to work or take them away in the evening, and were packed as closely as already indicated, they would fill the whole carriageway for 804 feet with a five story building, 1,480 feet with a ten story building, 2,772 feet with a twenty story building, and 3,744 feet with a thirty story building. (Diagram 2.) If only half the carriageway were taken on the ground —that the other half of the street might be left for the use of the buildings on the other side—these lengths would be doubled; it may reasonably be said, therefore, that with the present extent of ownership of motors in America, the cars require nearly twice as much length of roadway as the people would require walking along the footways. We must not forget, in considering these figures, that no account has been taken of the increase of other, particularly trade, vehicles, required to deal with the growing volume of merchandise handled by the increasing population. It is, perhaps, not necessary to take account of the increase in motor omnibuses and other similar vehicles, because we have reckoned the whole of the people as either walking or riding in cars. On the other hand, it is a well-known principle, which applies as far as I know generally in all towns, that public passenger traffic increases much faster than the population. In fact, the increase of traffic and of the number of journeys per head is frequently more than the square of the increase of population. That has been so both in London and New York. To the extent to which this holds true, Diagram 2 understates the increasing demand on the streets due to increase in height.

One more example for which accurate information is available is the Woolworth Building, which stands on a plot 151 by 195 feet, with streets on three sides. It has, including basement, 28 stories covering the whole area of the building apart from lighting wells, and a tower containing a like number of additional stories. The day population of the building is 14,000 people, in addition to large numbers of visitors. The front roadway is less than 100 feet, but for convenience we will take the usual New York main avenue width of 100 feet, having footways 20 feet wide and a 60-feet carriageway. On the basis we have taken the footway would accommodate a maximum of ten persons walking abreast, and I have assumed that the carriageway would take eight motor-cars abreast, allowing only 7 feet 6 inches per car. The day population of this one building would therefore occupy 2,800 feet of sidewalk standing, or, walking, 7,000 feet; and a minimum of half an hour in passing any given point. (Diagram 3.)

In view of these figures you will hardly be surprised that the utility of the private car is diminishing, or wonder at the enormous congestion of traffic in cities like New York and Chicago. It is only because the very tall building is quite exceptional in New York, and even on Manhattan Island is confined to very restricted areas, that an absolute deadlock has not already been reached. The vast majority of buildings, even in the downtown area, as may be seen from a recent aeroplane photograph, are still of the old height of five or six stories. Even as it is, the problem of traffic is almost insoluble. Along Fifth Avenue it is now regulated by signal lights. When the white light shows, the stream flows along the avenue; when the green light shows, the traffic along the whole length of the avenue thus controlled must stop at every cross street. These cross streets occur at intervals of only 88 yards centre to centre, and all traffic must stop with the signal, whether any vehicle requires to cross the street or not. The whole stream must be stopped long enough on the average to allow the traffic of the busiest cross streets to pass, and must be held longer than necessary at all the less busy cross streets. The arrangement is, in spite of these drawbacks, considered to be a great improvement on the previous condition.

The difficulty of dealing with the foot passengers is

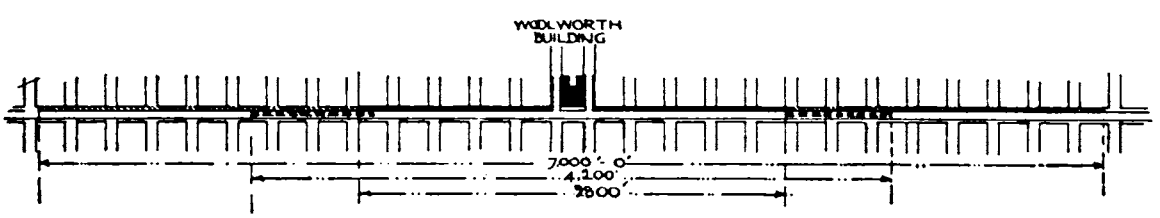


DIAGRAM 3.—SHOWING FOOTWAY AND ROADWAY REQUIRED BY DAY OCCUPANTS AND THEIR MOTOR CARS.

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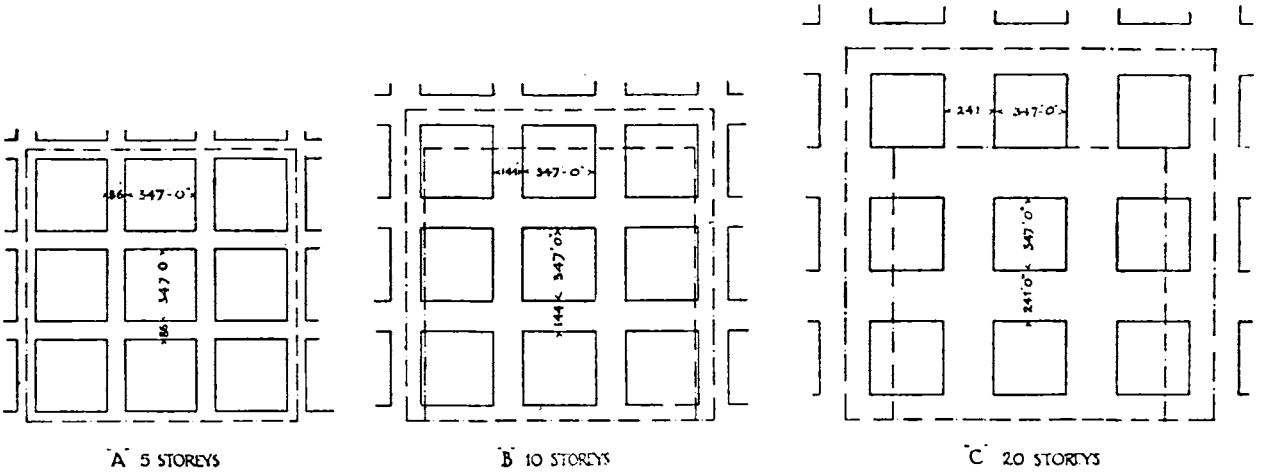


DIAGRAM 4.—ROAD SPACE REQUIRED TO GIVE EQUAL ACCOMMODATION IN PROPORTION TO FLOOR AREA, BUILDING BLOCK REMAINING THE SAME SIZE. BUILDING BLOCKS OF SAME SIZE AS THOSE IN CHICAGO LOOP

no less than that of the road traffic. It is estimated that the subway could deal, as a maximum, with 60,000 people per hour, if they could get to the trains. But we have already seen that the 14,000 people from the Woolworth Building would require half an hour to enter a station. The congestion at the tube entrances under these circumstances can hardly be surprising, but this is not the worst. Today it is doubtful whether any relief can be secured by constructing new tube railways. Even with the present limits of height allowed under the recent zoning laws, I was informed by the engineer in charge of these railways—and the figures we have looked at confirm this—that buildings, the population of which would fill the railway for the best part of an hour at the busiest time of the day, may and probably would be erected on two or three blocks adjacent to any new tube station. The total congestion, in fact, might easily be increased instead of being relieved by the new facilities. The advocates of higher buildings seem to take the view that it is the business of the public authorities who are responsible for the streets to find accommodation for any amount of traffic which their buildings may originate. Some of them, it is true, suggest that the owners might agree to a strictly moderate set-back of their building for every increased story in height. What general benefit this would afford beyond a little local relief in front of their building itself is not very clear, particularly in view of the length of footway, far exceeding the length of the building, which we have seen is required to provide bare standing space for the occupants of the high buildings. Many times even that length must be congested by those occupants before the volume of traffic is dissipated. But it will be well to prove the futility of such suggestions by showing what extra space would actually be involved. For this purpose I cannot do better than take the conditions in the central area of Chicago, locally known as the Loop. Full particulars are available in regard to this area, and, being regularly planned on the checkerboard system, it is easy to reduce conditions to diagrammatic form.

I have had some recent experience of traffic conditions in this district, and there can be no question that the streets, although representing about 40 per cent. of the total ground area, are quite inadequate to carry the present traffic with reasonable despatch, let alone comfort. I am satisfied that they would be taxed to the limit of comfortable conditions if the average were five stories instead of seven. Neglecting the cumulative increase in traffic which universal experience shows to arise from increased population, and assuming that full value is obtained by increasing the area of roads *pro rata* with the increase of the density of population, I have calculated the roads that would be required to give the same relative accommodation if the average height of the buildings were increased from the assumed 5 to 10 and 20 stories. In the first instance, keeping the average size of the building block the same, I find that for 10-story buildings to give the same ratio of street area to net floor accommodation as at present, the widths of the road would have to be increased from their present average of 86 feet to an average of 144 feet; if the stories were increased to 20, the width of the streets would require to be 241 feet. (Diagram 4.) If the increasing intensity of traffic were assumed to balance the loss of floor space, and its volume were taken to expand *pro rata* with the increased number of floors, which is probably nearer the actual truth, still greater road areas would be required (Diagram 5). It will be noticed that if such an expansion of road space had to be applied to the whole Loop area, to accommodate traffic resulting from the increased height of buildings it would be necessary to pull down a considerable part of the town surrounding this area to provide the additional land required! It is obvious, however, that any such increase in the width of the roads, even on the more modest scale first shown, would be impracticable, and that if it were attempted the traffic would not be relieved to a degree anything approaching the extent of the increase. The delay at every crossing for vehicles, and still more for foot passengers, owing to the increased width of the streets, would be very great. This is already noticeable in New York, where most avenues are 100 feet, and the cross streets

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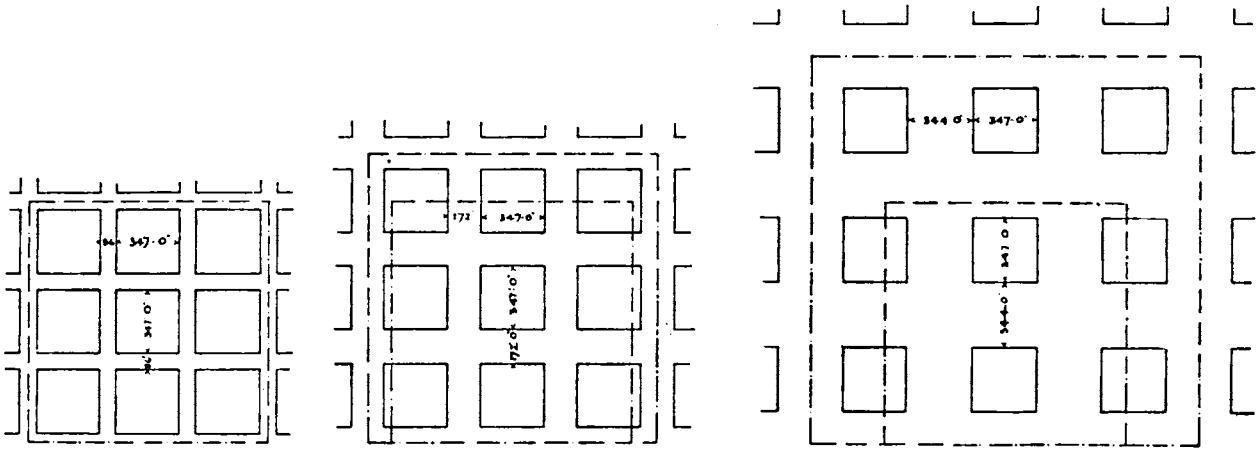
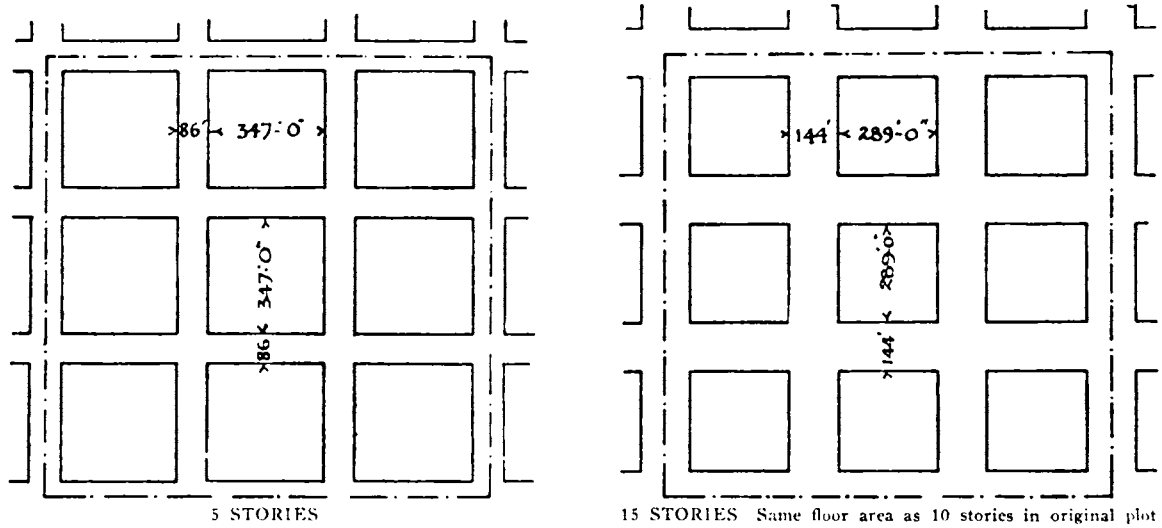


DIAGRAM 5.—ROAD SPACE REQUIRED TO GIVE EQUAL ACCOMMODATION IN PROPORTION TO NUMBER OF STORIES, BUILDING BLOCK REMAINING THE SAME SIZE.

64 feet, wide. The time occupied in crossing these many streets, and the extra delay to traffic in consequence, is obviously a serious factor, as compared with the conditions in the City of London, for example.

But suppose, instead of keeping the building block the same size, we try to follow literally the suggestion of some of the advocates of high buildings in this country, and provide sufficient additional road space by means of a set-back, thus reducing the size of the building block. How then should we fare? This also has been tested. (Diagram 6.) Taking the same bases of calculation, and assuming that the additional accommodation required is equal to the increase of the total available building area from 5 to 10 stories, I find, in order to provide the necessary set-back around one of the average blocks in the Loop, that the reduction in the size of the building to allow for enough extra road width to maintain a constant relation between floor space and road area would just about represent the area provided in an additional 5 stories; so that instead of increasing the building from 5 to 10 stories, the building would have to be increased to 15 stories to provide the required accommodation. In other words, if the owner of the aspiring building is to provide adjacent only to his own frontage an addition to the existing road space *pro rata* to the increase of net available floor area, his loss of land will be so great that he will have to add double the number of floors required on his original area! Even then only the roads adjacent to the building block would have been widened.

If the difficulty of accommodating the pedestrian and the moving traffic is great, the case of the standing motor-car is even worse. Of the 60,000 motor-cars which the present occupants of the Loop own, only 3,500 can find parking places in the Loop area. If the whole road space were packed solid with cars, there would still be only standing room for 11,000 cars, or one-fifth of those owned. As a matter of fact, the car owners of the Loop area have appropriated the large open space between Michigan Avenue and the Lake, set aside for Grant



5 STORIES

15 STORIES Same floor area as 10 stories in original plot

DIAGRAM 6.—SHOWING WITH SAME ROAD SYSTEM THE WIDENING OF ROAD AND CONSEQUENT REDUCTION OF BUILDING BLOCK TO GIVE SAME ROAD ACCOMMODATION IN PROPORTION TO FLOOR AREA.

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Park, and it is no uncommon thing to see 25,000 motor-cars, more than twice the number that would fill the streets of the Loop, parked at one time in this gigantic motor garage. Indeed, the promotors of Daniel Burnham's great town-planning scheme, of which this park is a conspicuous feature, are not free from anxiety as to how to recover this area from the motor owners to lay out and plant it.

As the motor-car is mainly used in America by people who do not employ a chauffeur, the question of parking the cars already presents an unsolved problem. The difficulty is felt especially in the more congested areas, where it has had to be solved by forbidding cars to stand more than a few minutes, and then only in the less frequented streets, which means that the majority of car owners can no longer use them for going to and from work. Even in small cities, however, it is becoming a serious problem; and plans of city improvements now indicate not only the lines of traffic provided for, but also the amount of space left over for parking cars against the sidewalk. It is common in cities of quite moderate size to drive round several blocks, or along several streets, before parking space can be found. Anyone going from business to his club to lunch may frequently find that in walking to the car and back, and walking from the nearest parking space to the club and back, he has traveled a greater distance than if he had walked from business to the club!

Enough has, I hope, been said to prove the main contention—that increase in height of buildings necessarily involves augmented street traffic; that where the traffic has already reached the comfortable capacity of the streets, any further increase in height must increase congestion, with consequent loss of time and efficiency for all users of the streets; and that this increase cannot in practice be met by street widening, because the utmost which can be done in this direction can barely cope with the other causes which in all growing modern towns are tending to swell street traffic.

Increased height, therefore, means increased traffic congestion. It is urgent that we should realize this while there is yet time.

Let us compare conditions in the Loop area of Chicago with those in the City of London. The areas are in many ways comparable; each is the main commercial centre of a great city. The City of London, with an area of about a square mile, is the heart of a town and urbanized region the total population of which approaches 9 millions; the Chicago Loop area, about one-third of a square mile, is equally the centre of a total population well over 3 millions; both areas are served by numerous railways, street cars, etc., and contain a large number of official and commercial buildings, retail stores, and warehouses; one is bounded on the south side by the River Thames, the other on the east side by Lake Michigan. The City of London contains about 638 acres, the Loop in Chicago only about 212 acres; the day population of the City of London is about 416,000, or 614 persons to the acre; the day population of the Loop is about 600,000, or 2,830 persons to the acre. In Chicago the total streets represent about 40 per cent. of the area; in London, including private back streets, only about 25 per cent.; in Chicago few of the streets are less than 46 feet wide, some of them are over 100 feet, and the average width is 86 feet; in the City of London the average width of the streets, including some which are footways only, is about 28 feet. In spite of the relatively liberal provision of sidewalks in Chicago, it is common at busy times to see foot passengers swarming off the footway until they occupy the whole street area, and completely stop for the time being all vehicular traffic. At other times, the queues of vehicles waiting to pass some of the important crossings accumulate so that the rearmost vehicles in the queue may have to wait three times before they are able to pass one of these crossings. The queue becomes more than twice as long as can be allowed to pass during the few minutes' interval it is practicable to hold up the opposite stream of traffic.

These conditions have arisen from the intensive use of a limited number of 10- to 20-story buildings, sufficient only to raise the average height over the whole area available for building to 7 stories. If the land in the City of London should be used to the same degree of intensity, and sufficient high buildings were allowed to give an average of 7 stories as in the Loop, I estimate that the day population would be 1,845,000, instead of the present 416,150. In that case the narrow streets of the city would have to carry four or five times the present volume of traffic, already far in excess of their comfortable capacity. If not a single story is added to any building in the City of London, the increased use of the private motor car and other causes will increase the traffic in the area to a very serious extent.

Unfortunately I have come across no evidence that the increasing use of the private motor-car causes a diminution in the patronage of public means of conveyance. On the contrary, experience shows that this demand for public transportation facilities is still rapidly growing. The increasing extent to which the streets of London are now being occupied by the motor omnibus must be apparent to everybody, and the lengthening queues of these 'buses which accumulate on important road crossings already present a formidable appearance. It is clear that, quite apart from any increase in the height or volume of buildings in the central area of London, we are likely to face a steadily increasing volume of private and public transportation on the streets. It will tax all our powers to provide adequate road space to deal with this traffic, without permitting any increase in the height of buildings, with the consequent further congestion of people and business in the centre.

Advocates of high buildings suggest that their policy would at any rate reduce the general traffic problem. I find no evidence to support this, and much that tends the other way. If the concentration of people in high business and residence buildings tended to reduce traffic, a comparison of the traffic conditions in New York with those in decentralized London should give some indication of this. On the contrary, the number of journeys per head of the population in New York exceeds 500 per annum, considerably more than in London, where last year they numbered 390.

It is true that Mr. Frank Pick, from whose recent paper read at the London School of Economics I am

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now quoting, estimated that the journeys per head this year (1923) will reach 414. This will indeed be a striking testimony to his genius for stimulating traffic by fascinating pictorial advertisements, aided a little perhaps by the abnormal shortage of houses, which obliges a larger proportion of the population than usual to live in the wrong place. But even that figure, if reached, is well below the New York number; and I have no doubt there are counterparts to Mr. Pick at work boosting up the number in that enterprising city also.

The amount of cross traffic in London is enormous; it is estimated that 60 per cent. of the population engaged in business or labor in the area lives in one place and works in another; while for all purposes something like three million people converge on the central areas daily.

Last year I spent some time consulting with the committee preparing a new plan for Greater New York on this and similar problems, and was impressed by the fact that the multiplication of dwellings and of business premises in the centre, due to high buildings, far from relieving the strain upon traffic, tends considerably to increase it. Moreover, there was no evidence that any economy in the space covered by the town or the distances to be traveled was secured as a result of concentration in high buildings; certainly no reduction was apparent in the time occupied in traveling about the town or to outlying suburbs. This came somewhat as a surprise. Like most casual visitors, I had not realized how small a proportion of New York is represented by Manhattan Island, nor had I previously experienced the very long railway journeys necessary to reach some New York suburbs. If circles having a radius of five and ten miles respectively are drawn on the maps of London and New York the result is instructive. A considerable proportion of the area within the circles as applied to New York is occupied by water; but a very large area of the town falls outside the outer circle; whereas the bulk of the built-up area of London is within the inner circle; and most of the farther suburbs, such as Ealing, Hendon, Woodford, Ilford, Woolwich, Bromley, with the larger part of Croydon, Merton and Richmond, fall well within the outer circle. Chicago also occupies a remarkably large area. The territory of the town itself extends for a length of twenty-six miles, with a width varying from six to nine miles. Outside that area are considerable suburbs, such as Evanston and Winnetka in the north, and the important Gary industrial area to the southeast. It is not easy altogether to explain the large areas covered. A much greater street width is provided in American cities, and this has a cumulative effect on the expansion of the town. (Diagram 4.) Moreover, as the area of a town varies not in proportion to the diameter but in proportion to the square of the diameter, a difference of density of dwellings, or of occupancy generally, has less effect on the distance traveled from the suburbs to the centre than would be expected. (Diagram 7.)

These considerations go some way to explain why the more general use of high buildings leads to little, if any, reduction in the size of American towns. A consideration of our own habits will suggest why they lead to an increase rather than a reduction in the demand on traffic

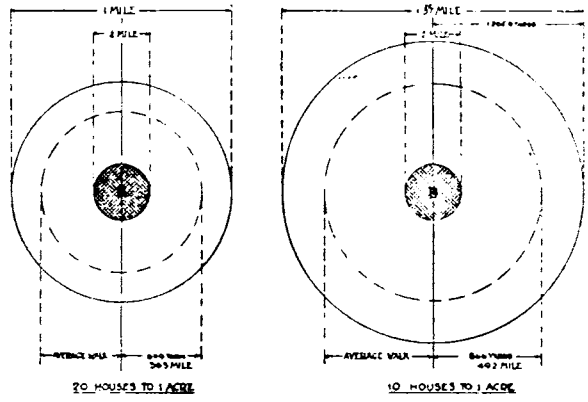


DIAGRAM 7.—AVERAGE WALK TO STATION AS AFFECTED BY DENSITY PER ACRE OF DWELLINGS.

Houses to Acre	*Ave. Plot Size*	*Ave. Walk*
10	420 sq. yds.	866 yds.
20	185 " "	639 "

RAILWAY STATION IN SOLID BLACK; BUSINESS BUILDINGS, ETC., IN HATCHING; RESIDENTIAL AREA IN WHITE.

facilities. About 13,455 people who work in London are brought thirty-five miles every day from Southend. Let us examine the relative transport facilities which these people require, compared with what they would need if they were added to the population adjacent to the central area by increasing the height of the buildings there situated. Instead of 13,000-odd people taking one journey to and from their work in the day, and an occasional extra business journey, is it not clear that if they lived in the centre, they and their families would be on and off the various means of transport all through the day; that the extra tradesmen with their delivery vans; postmen, milkmen, doctors, and all other people attending their daily wants would enormously swell traffic in the central streets? Instead of 13,000-odd persons being carried twice or three times in a day, a population of four or five times that number would be utilizing the streets and all the various means of public transport the whole day. I venture to suggest that, contrary to the view of the advocates of high buildings, it is approximately true that in a large town, the nearer people live to the centre, the greater is the demand made on the street and the various public transport conveniences, and the farther they live from the centre, the less is that demand. Anyone who will consider the ways of his own family and those who serve them will confirm this.

The real transport difficulty in connection with the residents in Southend and similar places is of quite a different nature. It is not so much a question of congesting the traffic in the centre, as one of the cost of providing adequate transport facilities at the two busy times, when folk are going to or from their work, in cases where the demand for transport during the remaining hours of the day falls far below the peak load. This problem is by no means insoluble. The chief difficulty springs from the capital cost of the permanent way, which may have to be spread over a short daily use of the line. The running of a full train from start to finish of the journey is more economical than the condition of most

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suburban traffic, in which the load begins to diminish at the first stop, and most of the trains have one-third or two-thirds of their seats empty for a considerable part of the journey. The rolling stock can easily be diverted to the lines where midday traffic is most intense. The capital cost of the permanent way itself would be immensely reduced if the routes were reserved in the regional town plan. The means of transport are now so varied that one suitable to most kinds of load could be provided if there were effective co-operation between town planning and transport authorities; while the efficiency of the transport itself could be increased if all means were co-ordinated under one direction.

The haphazard growth of our towns has encouraged haphazard thinking about them. The owner of a building site is naturally obsessed by the importance of securing the most intensive utilization of it. When he has fully occupied existing buildings he will want to crowd it with others, and when these are occupied he will seek to pile more stories on the top. The town planner, surveying the territory as a whole, may take a very different view: he sees that it is often less costly to acquire a second site than to overcrowd the first; he realizes that midst the scarcity of many things there is no want of space, and that congestion is not due to lack of land.

Some truths seem too obvious to be readily credited; men are prone to try clever and complicated devices to attain the same end by a more devious route. Perhaps the nation is feeling specially poor, but to produce more wealth or to waste less seem too simple methods of enrichment to be popular. Oppressed as we are too with the miseries of overcrowding and housing shortage, how hesitatingly does the simple remedy of building plenty of good houses secure full recognition! Similarly, with towns already unbearably congested, and their street traffic in danger of being reduced to crawling pace by its excessive volume, the idea that congestion would best be relieved if we desisted from crowding, or traffic most effectually be reduced by better distribution of people and buildings is much too simple to be readily accepted. Indeed, many seem bent on piling more building on the top of that we have, and boring more subways or erecting more elevated tracks to pour additional multitudes into the already swollen torrent in the streets.

To the town planner this seems sheer madness: but perhaps there is something unusual in his make-up which predisposes him, with childlike innocence, to put more faith than some of his neighbors in the simple and the obvious. Or perchance, if an architect, there is something in his training or his practice which encourages this tendency. At least it is a fact that the Art of Design, which it should be the purpose of his training to develop and his life work to practice, consists largely in finding simple solutions for seemingly complex problems. When the designer cannot see the forest for the trees he is a lost soul. He must depend on his trained imagination to keep the forest as a whole ever clearly in his view while his mind is occupied threading its way through the obstructing trees and their distracting shadows. If he misses the one simple and direct path to unity, which when found will appear to all to have been quite obvious, he will usually have produced not a design at all, but a mere compilation.

I have ventured to draw from American cities a warning as to some things which we should avoid, and to use their experience as a guide for our future steps. Lest I be thought to undervalue the marvelous civilizing achievement those cities represent, or to be lacking in appreciation for the genius which their architects have shown in handling the novel and complex problems in design which have been presented to them, I propose to illustrate the difference between a design and a compilation. Some of their lofty buildings soaring up many hundred feet into the air are as beautiful as they are impressive. And the same sense of unity and simple rightness is as evident in many of the buildings which do not derive impressiveness from their height. The Lincoln Memorial is a temple as worthy of the commemorating nation as the statue it contains is appropriate to the man whose memory is there lovingly enshrined. It is one of the most moving buildings I have seen. The architect, in spite of the distractions of log cabins, freed slaves, and the hundred other accessories that crowd around that picturesque life story, has gone straight for the main simple purpose: a great nation remembers its greatest son.

Men who have achieved within a few decades such culture, such a high level of design as these buildings display, when they turn that capacity upon the problems of town planning, as they are beginning to do, will, I am convinced, achieve equal success.

Beautiful as are many of the towers of New York when considered singly, there is yet lacking to me the sense of grouping between them which would spring from their forming parts of a greater design. Fine as individuals, they bear yet little relation or proportion to each other. I am inclined to compare a cluster of them with the three related towers of our older Lincoln.

However that may be, as architects we are trained to rely on orderly planning and proportional relation. We naturally believe that they can be applied to towns; that the application of foresight and planning would result in the better distribution and relation to each other of industrial, commercial and residential areas, and could secure the more generous reservation of belts of open space to protect and define the different parts of the town, the wards, the suburbs, the dormitories or the satellite towns; that cities should extend not by fortuitous accretions around the circumference, but by the addition of definitely planned and defined suburbs or satellite towns, each made as self-contained as possible, depending on the main centre only for those functions which are by their nature centralized; that the position of suitable transit lines to connect these parts to the centre and to each other could be laid down and reserved, and that congestion of street traffic could be prevented not only by the provision of adequate roads, but mainly by the proper localization of the life of each district, and the saving of a large part of the useless carting and rushing about which now springs from so many people, buildings, and parts of the town being in the wrong places. We are convinced that congestion will be cured not by increasing the density of the crowd, but by transforming the crowd into an orderly queue. This at least is the alternative we offer to the policy of expansion upwards, convinced that crowding gains nothing.

RAYMOND UNWIN.

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More Plans for More Chaos

The witness had been sworn and was confidently testifying. He had arranged his information in well-ordered columns of figures. The population, the growth of population, the number of old and new habitations, the number of rooms in apartments. He proceeds through processes of addition, multiplication and division; fractional people emerge from his calculation and it becomes clear that there is no shortage of habitations.

Again the formula of being sworn and the process of testifying. The new witness proceeds through the use of more well-ordered columns of figures and mathematical processes; fractional people again emerge out of the calculations and this time it becomes equally clear that there is a serious shortage.

So it goes on day after day. Before the Commission, sitting to determine the state of housing, come many witnesses. Landlords, tenement dwellers from the slums, authorized representatives of owners of property, spokesmen for tenants, social workers, lenders of money, housing experts, realtors. They come and testify as to conditions—to facts, and so swell the flood of evidence which runs alternately to affirm and to deny.

I puzzle as I observe the flow of conflicting testimony. Are these sworn witnesses wilfully coloring their testimony; or are they presenting "facts" as the same appear from the several angles from which they view them? Seemingly the conflicting run of testimony could be accounted for on such grounds. But so to account for the discrepancy in the statements of the experts testifying does not help to answer the question: How may we find out about this matter?

So I cast about for a viewpoint from which to observe the present state of housing. I would overlook the entire field, make note of conditions and then form conclusions. Specifically I want to know: Is there a shortage of habitations—are there enough houses? But first I must know whether the conditions under which people live are "tolerable" or "intolerable." And I do not even know what I mean by these terms I use so glibly. I can discover no stable ground upon which to establish a base from which to deploy my lines of inquiry.

I think of "the standard of living." But what does one mean by the standard of living—that constantly employed term? What did it stand for yesterday; what does it stand for today; what does it stand for to those testifying under oath to bring only facts to bear witness?

I attempt to give it definition. I consider it in the light of our knowledge. I consider it with reference to our instinctive traits of character; I conceive it with reference to the potentialities of our present industrial capacity. But definition eludes me; for the standard of living is not given by these important factors in the case. It is to be defined by as many and varied conditions of life as there are people who attempt to define it.

But a qualification follows so sweeping as all but to deny that statement. The "standard of living" which serves to define conditions referred to as tolerable, or which by common consent is accepted as the base line in determining wages, is not a function of our instinctive traits of character, nor of our knowledge and skill, nor of our productive capacity. These factors play a part; they serve as the path along which we go upon imaginary excursions toward an ideal; they form the groundwork of our wishing lives. But what passes for a tolerable standard of living, so far as concerns the fortunes of the vast majority of our population, is a consequence—the outcome of our adopted institutional scheme which revolves around the idea that the interests of all are best served when each takes for himself all that the traffic will bear.

Which brings us back to the point from which we set out, to the point from which the statisticians started, to the origin of the conflicting run of testimony, to the very occasion for the inquiry into the state of housing.

I leave the hearing. The street is like a great sluice pouring its contents into the subway where the flood surges as the trains enter and leave the station. Through the confusion of the jostling crowd and the din wing the ideas flushed by the testimony of the hearing. Associate ideas rise: More houses; more subways; more bridges above and tunnels beneath the rivers; double decked streets. Commissions on housing; commissions on transit; commissions on port and terminal facilities. Associations, committees, social workers, self-appointed spokesmen, architects, housing experts, city planners, reformers, coordinators of reforms—all organizing—inventing activities—preparing programs—issuing propaganda.

What signifies all this activity? Where is it leading? I do not know. But I sense a change of direction. It is certainly away from the time-honored doctrine of self-help and individual initiative. Apparently we may no longer depend upon the anarchistic action of the individual to supply all these things—to bring the population of New York up to 30 millions. For it is now and again said that the city or state must step in; and there is a tolerant attitude toward measures of subvention. Seemingly, there is no help for that, for seemingly it is through subvention alone that these things are to be had in sufficient quantity and in time.

But why are we on the point of changing our course—of casting aside these time-honored principles of economic doctrine to the end that we may achieve ever-increasing complexity and magnitude? That is to say, why do we resort to measures of subvention to the end that we may more speedily and more certainly go forward with the work of building our tower of Babel—our bridge that goes nowhere?

In the subway I note the faces of people riding in discomfort. Many are reading. Reading of the housing shortage and of the plans of the Commissions for more houses, more subways, more bridges, more tunnels, double decked streets—plans for the coming of 30 millions.

Plans! Yes, plans for the building of these specific things, no doubt. But are these plans formulated with respect to a conceived, comprehended end? I doubt it. For in them I can find nothing more definite as an end to the effort involved than ever increasing complexity and confusion; ever increasing magnitude.

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MORE PLANS FOR MORE CHAOS

So, as I scan the faces I ask: Do you, and you, and you want these things for any added pleasure and comfort that they might conceivably bring to you? Do you advocate collective action and measures of subvention that we may more rapidly increase the complexities of living, that we may more rapidly increase concentration and congestion? I do not know; but I think that soon you may be among the advocates of such action.

And most of you will admit at the same time that these things in themselves—the increasing concentration and congestion, the mounting complexities and discomforts, the ever increasing magnitude—are not desirable. But you will rationalize: There are our instinctive traits of character, formed in the night of time, which operate to herd us together; and these impersonal events always seem to run to a beneficent end! And so you accept and approve plans of action—aimless plans fading off into confusion and chaos—and so you will follow along and affix the title: Steps of the Evolutionary Process—Progress.

But why do you rationalize; why do you view as elements of Progress these utterly aimless plans fading off into chaos? Why do you with a Heave Ho! Altogether! strive for those things which you do not want individually? No doubt, if we sought the reason, we would tend to oversimplify the complexities of the case, and so would leave on one side a host of causal circumstances which would account for your attitude and action; but it seems to me that you now struggle to produce the things you do not want—things that to you, individually, are matters of utter indifference; that you now strive for greater concentration, congestion and magnitude, since they are now rated as good. For it is out of such conditions that the price increments of ownership are largely derived. Activities which tend toward this end are rated as beneficent. So it follows by easy steps under our system of investing, of living by owning, that a condition of stability with respect to the pecuniary values of ownership must be viewed—not as a good, but as a sign of decay. Action which would arrest increasing concentration of congestion is, per se, under this point of view to be deplored.[1]

Of course, in devising plans for more houses, more subways, bridges and tunnels—for millions upon millions of people—you work toward ends that are good in your sight. But it does not follow that their outcome is due to be other than disintegration and decay. For the run of events over the known past would seem to indicate that man has ever gone to his work under guidance of such ideas as he had accumulated, meeting the conditions of an ever changing material environment in ways that, presumably, were good in his sight. But the upshot of it all has been a series of events running in cycles of growth and decay.

So what ground have you for your optimistic attitude when you rest your case on the assumption that events tend toward a beneficent end? Does not the evidence at hand—the conditions of tension and uncertainty under which men now live and do their work in our rapidly congesting centers of population—suggest that our adopted institutional scheme has approximately run its course? Does it not suggest that the tension and the uncertainty will not be decreased by increasing the magnitude of the material and institutional complexities?[2]

No doubt you who are riding in discomfort would greatly deplore such an attitude; and you would rate it a pity that one should take such a view of Progress. For clearly what is implied is that something would be gained by standing aside while Progress goes by neglect. But a passive attitude would not increase the velocity at which we drift into cities of thirty or forty millions. In that negative sense it would aid in distribution.[3]

How to provide for distribution rather than concentration of population! As a suggestion, that cuts squarely across the aims of every vested interest involved however remotely, and hence is to be rated absurd and irrational. But it is absurd and irrational only with respect to an institutional scheme which has as its central aim the hope of living by owning. Which serves to show in what manner of trap we of the twentieth century are caught.

F. L. A.

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[1] Any community in which the material facts, its land, its buildings, and so forth, are not worth more today than they were yesterday, where they may not be rated at less today than they will be worth tomorrow, where existing material facts may not be capitalized at something more than they cost—such a community is by common consent rated a "dead one." And what is most certain to place a community outside this category of dead ones is increasing concentration, congestion, magnitude—an increase of population. So that "stability," that state of affairs oft referred to as something to he sought after, is not after all a condition to be desired by those who own, and so by the logic of business it is not a condition to be desired by those who do not.

For as seen in relation to other communities which are rapidly expanding—becoming congested—a stable community appears to be moving backward at a like rate of speed. From which it follows that the basis of capitalization appears to be shrinking, thus threatening the whole credit structure of the community. No wonder, then, that a serious proposal looking toward stabilization or decentralization fails to draw out shouts of approval. No wonder, then, that such a proposal is not even worth advancing as a topic for academic discussion.

[2] Ordinarily the growth of urban communities is accounted for on the ground that it is due to the promptings of our instinctive traits of character. Unlimited concentration is therefore viewed as a trend that can't be helped; and according to this hedonistic view a proposal to arrest this trend would appear dubious indeed. But many illustrations come ready to hand which, if closely scrutinized, would seem to indicate that the peculiar growth of the modern urban community is due mainly to institutional and economic factors of a transitory nature. The youths and maidens who abandon the life of rural communities do so under the coercive action of an education which runs all the while to degrade the status of those engaged in materially productive work. "Merton of the Movies" may be an account of instinctive action; but its significance may be better understood if the force of institutional and economic factors, bearing upon Merton, are taken account of. In the same way the shift in the distribution of population which occurred in England a century and a half ago may be better understood if the Enclosure Acts and the rise of machine production figure as factors in the genetic account. The rural population may have sought comfort in centers of population, but the seeking was instinctive only in the sense that it was made to avoid want and privation occasioned by an institutional change and the introduction of an economic factor into the case. The move was made under compulsion; and was not instinctive in the sense that the instincts act creatively toward a beneficent end.

[3] This is not to suggest that all's well with the rural population. Something has been said in the press about their condition, and legislative measures of subvention have been proposed for good or ill as the case may be. So that the implication—that we should so shape our plans of inaction as to bring on an increase in the numbers constituting the rural population, of whom it is said that they are now laboring under some difficulties and numerous handicaps—may not appeal as helpful. And, true enough, under the circumstances the gains so to accrue do not appear upon the surface. But a little thought will eventually come abreast of the proposition that the rural population—so long as it remains truly rural—must of a necessity busy itself in materially productive work, and as a final resort, if pushed to it, can manage to make both ends meet. Which is more than may now be said of those who make up the urban accummulations of Christendom. So that, to deny, by inaction, measures of subvention with respect to increasing concentration in urban areas is not in the long run, after all, to deny to anyone the prospect of living by engaging in materially productive work.

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The Quality and Quantity of Buncombe

It is said that the word "bunkum" was in use in New England some time before Felix Walker, representative in Congress from Buncombe County, North Carolina, made his now celebrated speech. Noticing a certain impatience among his Congressional listeners, he paused long enough to remark that "he was not speaking for their benefit but for Buncombe!" The earlier derivation of "bunkum" is said to be from the French-Canadian *"il est buncum sa"* (il est bon comme ça). In our day the colloquial abbreviation is "bunk," although our English brethren, quick to appropriate a bit of slang for which their need was not far short of our own, still cling to the North Carolinian patronym.

Be these things as they may, a considerable case for bunkum is just now being made out against the building industry. To be sure, bunkum is in the air. We have it wholesale in Government, for example, and the present spectacle is enough to make even the most jocund voter gasp privately if not in public. What the complete extent of bunkum is we do not know. We might hazard a guess that it is somewhere around 98 per cent of everything that is spoken or written, at least. But in the building industry we have a good deal of sly winking and innuendo over the architect's fee, the quality of his specifications, the immorality of the contract. The press just now is rather more than ordinarily full of jibes and jeers at the building business, and while there is not much that can be done about it, perhaps, there is certainly nothing worth doing until the industry explores itself. The Congresses of the Building Industry are the best thing for that purpose we have had up to the present time, and at a luncheon given by the New York Congress in January, Mr. Charles L. Eidlitz, a well-known electrical contractor, talked on what he called "De-bunking the Contract." We imagine there would be some differences of opinion as to how much of what he said was true, but we think no one would deny that some of it was true. The question, then, is—how much, and what part?—and the answer is not for us. We reprint Mr. Eidlitz's remarks and also a contribution following thereupon sent us by an equally well-known sub-contractor, who, for reasons we are bound to respect, desires that his name be withheld for the moment.—EDITOR.

Mr. Eidlitz spoke substantially as follows:

It appears to me, that in recent years (and I mean particularly the last ten or fifteen) there has crept into the building business, an unusual amount of *bunk*.

In my father's day, a builder took a great deal of pride in his work. Every brick had to be a perfect brick. Every joint had to be absolutely right. The mortar had to be just as good as it was possible to make it, and the lines, the levels, every detail, had to be perfect or as nearly so as was humanly possible.

It was nothing unusual in those days for my father or, for that matter, for other builders of his time to come on the job, take one look at a wall and order it taken down and rebuilt (even though it was contract work) because it did not suit him and did not reflect the quality and accuracy which he stood for. If any of you men here, architects especially, came on your job and found your builder ordering a piece of wall taken down (even though it were built in the wrong place) I really believe you would rush to the telephone and call for an *ambulance* or an *alienist*. In those days a man felt that his work reflected his honesty and ability. Is that the condition today?

Now, there may be a builder in this city who works on this basis, but certainly such men can be counted on the fingers of one hand. What has brought about this change? I am asking you the question, but I do not expect you to answer it. The answer is *bunk!* much and more *bunk!* And so I argue logically, I think, that if bunk is the cause of lack of quality, pride, responsibility and self-respect, then if we can de-bunk the contract we may expect a return to decency.

But you can't de-bunk a thing until you gather the bunk together where you can see it and dig it out. And when you dig it out, you must take it out by the roots. I do not expect to be able to do this here today; but I hope to point out just where some of this bunk is, mark or stake it out, paint a picture of it and leave it there exposed and naked so that you may have it constantly before you, like a September morn.

As I look around this table and recognize the different interests represented, i. e., architect, general contractor, manufacturer, sub-contractor, I wonder whether you really want the truth, or whether the usual pussyfooting would not be more to your liking. I attend a great many functions and every once in a while a speaker is criticized. They say "he was unhappy," "he went too far," and it has been my observation that what they really should have said was "he told the truth and we don't like the truth; we like to be stroked with the hair and not against it," but *I* always realized that no animal I know of goes after fleas with the grain; it always goes against it.

And so in an assemblage of this kind, I find that if the speaker is a sub-contractor he soft-pedals on the general contractor and architect, but he lets the supplier or manufacturer have it *right in the eye*. When the general contractor has the floor he smears it all over the sub-contractor and daintily strokes the architect's pelt in the direction of the grain. When the architect speaks he, being a believer in reciprocity, pianissimos along the entire keyboard.

Now that's the beginning of the bunk in the building business. What then is really the matter with our building contracts? Nothing much! only that the architect is supposed to be infallible, that the general contractor aids and abets him in this idea, and that the sub-contractor is presumed to be a mind-reader and a graduate gambler, whose slogan should be "heads I lose, tails you win"; and the poor boob is expected to smile while he signs, seals and delivers his contract, and agrees forever after to hold his peace.

Is it a wonder then, that if by some chance either or both architect and general contractor can be caught asleep at the switch, this bag-carrying sub should suddenly get

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a stiffening of the spine, and make an attempt to stick it in and turn it around?

It has been my job for the past year to try to change this condition in the electrical industry, and I want you to know that it's been *some job*. Now, naturally, I know more about the electrical end than I do about the other trades in the building business, but from what I am told by nearly all, the conditions seem to be identical.

If you bought a railway ticket, and in the rush the agent gave you too much change, you would consider it dishonest knowingly to pocket the money, even though you might argue that the railroad company had plenty of funds and wouldn't miss it. No, sir! you couldn't sleep that night; you couldn't look your wife and children in the face unless you went back, even at the risk of missing your train, and called his attention to his error. I might cite dozens of examples having the same answer.

But let some contractor put in a price which, on the face of it, shows or indicates that he has made an error, that he has omitted or misunderstood the requirements—do you take the chance of missing the train to a signed contract? *You do not!* You get to him as rapidly as possible, and get his John Hancock on the dotted line for fear he will wake up. So you have landed him, but he, feeling that you must have known his error, becomes sore. And yet he needs the money—but is it a wonder if he tries to get back some of this loss when you, unintentionally, give him an opening?

I know that the general contractor will say that he bases his bid on the low figure received, and that there is no reason why he should not do so. Again I am back to my father's time. They didn't use the low bid in those days if they thought the bidder had made an error or felt that he could not do the work properly for the money. Those men had a sense of responsibility, not only to their owner, but to everyone with whom they did business.

But what of the builder who is on a percentage or a fee basis? What excuse does he give? Why, frequently he makes capital out of this unfortunate sub's plight, and points it out to his architect or owner as an evidence of his cleverness. Why! many concerns actually advertise this sort of thing! If you were to translate some of their ads, de-bunk them, so to speak, they would read about as follows: "Give us your job—once we have the contract we will bait our line and whip the contracting stream up and down till some *poor, half-starved, irresponsible, fat-headed fish* takes the hook." This sport goes right down along the line to the sub, who practices the same game, only with a view to whether it will get him by. Quality cuts no ice with him either. Does this make for confidence or good will?

And now let me ask you, particularly, why should a sub-contractor—and I don't know but what nowadays it applies to the general contractor, and frequently even to the architect as well—why should he try to do anything more than he is absolutely compelled to?

Formerly a man gave an owner service and quality and so the owner gave him the next order. It was not essential that he be the lowest bidder. He was considered low enough for the quality that the owner insisted on. Today price is *king*. Yes, price is *queen*, and it's all the little princes and court jester; and that's *bunk!*

What chance has a sub-contractor for building good will today? He must be low to win. Yes, he must make a bigger mistake than any of the others to win. That doesn't make for quality and good will! But, you may say, when we have work to give out on day work or the percentage basis that's when he comes into his own. Well, does he? If it's a small job you may pay him his overhead and a profit, but usually on a sliding scale downward according to volume, so that if it's a job of volume he gets only his overhead and if it's very large you reduce him still further, and the one chance that he had is again taken away, and he accepts this because he fears that if he does not do so someone else will; and the Sherman Act prevents these men from getting together and establishing a method of getting a fair price. If it were not for the Sherman Act I could in the electrical end correct this in twenty-four hours, but if I did so today I'd be in Sing Sing by morning. The argument is invariably made to the owner that a percentage or fee basis is the only real and economical way of building a quality building, yet this same argument is denied to the sub-contractor by the men who would make it on their own behalf. Now, is the fee or percentage basis the way to build well and economically? I believe it is, but if it is why does it not apply to other trades than that of a bricklayer boss? What is the real answer?

What we need today in building contracts is the unwritten or "Lost Clause"—clause "X," as I call it—and some kind of an improved apparatus built along the lines of the old stereoscope—the little machine with the double lenses and duplicate pictures—so that you put the flat contract in and the machine shows everything standing out in the open; and as you look you will recognize here, there, and everywhere, hiding behind clauses, phrases, commas and semi-colons—what? *Just bunk!* Now, when the public, the architect, general contractor and sub-contractor, metaphorically speaking, all use this machine we will start the de-bunking process in real earnest.

And the "Lost Clause" to which I referred is as follows: "This contractor must be a competent, efficient, honest man; financially responsible and who is *known* to value his reputation *as such* above everything else in this world."

This is the clause that "de-bunks" a contract.

A "Sub" On Bunk

In respect to the matter of bunk, as referred to in Mr. Eidlitz's remarks above, a well-known "sub," who desires that his name be withheld for the moment, sends us the following rather terse comments on a building operation in general:

LOT OR PLOT—That portion of sand, rock, or loam that was stolen by someone many years ago, but by the use of nerve, surveyors and courts, has been bounded and parceled until it has become a thing of value and an income forever.

OWNER—That individual (or collection of same) who has the lot and wants a building on it. Before he (or

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they) start, three supposed truths are impregnated in his or their minds. First: That Architects are not practical business men; that they receive their fees for really doing very little, and if it were not for the Building Department an owner would not need them. Second: That there are no absolutely honest General Contractors, at least the Owner has never met any. Third: The building will cost more than has been figured, more than the Owner has been told, and more than it is worth.

AGENT OR BROKER—That exceptional piece of the male or female of the species who, by inherent energy, slick tongue and ample pencil, proves to the purchaser that peculiar paradox: "Land has no real value without a building on it and a building is worthless without land to put it on."

Sometimes used to secure a tenant for existing structures, but more often employed to prove to the purchaser that he is buying a bargain, and to the seller that he is receiving more than the property is worth.

The means of PASSOVER from the man who has cash to the man that wants it.

ARCHITECT—A man (or company of men) who has or have spent the best years of his or their lives in studying the classics and working for a Beaux Arts prize and are then compelled to design on an impossible rectangular plot a building disproportionately high which, on account of demanded daylight, prevents true proportion; whose resplendent superstructure without base is apparently upheld by a large sheet of plate glass called the store front, and whose cornice is up so high that it is designed for the eye of the man in the street rather than for the building.

This animal is generally disliked by owners: First, because the price he quotes for a building is generally too low; and second, because the items required to COMPLETE a building are often omitted from the plans and specifications.

This profession will be a good one when Owners are convinced that Architects are worth their fees, which will only result when Architects learn the building game by other means than through the mouths of Builders.

PLANS—Those lines and figures that constitute the lay-out of a building, generally not very well drawn and often poorly printed, given to Contractors as FACTS, but most always void on account of notes thereon, the principal one of which is "Check and Verify all conditions and measurements at the Building."

The Architect's SOP to the Owner which very seldom works out accurately because somebody who was more artistic than practical "never thought of THAT."

Sometimes used by Mason Foremen to catch mortar droppings on; in fact the more mortar spots on a plan the more practically a building is built.

Often used in the best architects' offices to show and prove the high cost of inferior draughtsmanship.

SPECIFICATIONS—Pieces of writing which explain everything but the facts, used principally to cover architects' errors and to explain impossible things. The most contradictory documents ever executed by the hand of man and generally written by someone who desires to say something and does not know how to say it.

Principally noted for what was intended and not what was written. Made void by the clause "AS MAY BE DIRECTED" following pages of minute complete and semi-legal language of detailed directions.

Never referred to on a job until an error is made and then only used to place the blame on the architect.

The perfect specification has never been written; it exists only in the mind of the owner, where wrapped up in his thoughts is an ideal building which, on account of the frailty of human nature, lacks expression in language and fulfillment in fact.

A "Scrap of paper" as far as inferior contractors are concerned.

GENERAL CONDITIONS—Those 18 pages more or less in the front part of a specification, describing in detail the powers of an architect, which few estimators or contractors read and which no one believes. These are never used or referred to excepting in a lawsuit and then the attorneys, judge and jury do not know what they mean, can never understand them and therefore they are never admitted in evidence.

If buildings were specified in classes then GENERAL CONDITIONS might be useful, but as nearly all architects want first class buildings built at a second class price GENERAL CONDITIONS are not needed by first class builders and are not followed by second class ones.

"PRIVATE" conditions would be a better name for them, but to dignify them with the caption "GENERAL" is a disgrace to the "ARMY" of architects which writes them.

BOND—A piece of paper costing the owner 1% of the amount of the contract, which he pays to satisfy his conscience in two ways: First, because he is afraid the contractor has taken the job at too low a price; or Second, because he has not properly investigated the contractor to whom he has awarded the job.

If the contractor is honest and competent no BOND is needed; if he is incomptent and dishonest it will cost the owner more in loss of rent and interest on his investment before he settles with the bonding company and has his work completed than it would have cost to have had a reputable contractor do the work.

A protection which does not protect from the thing which is supposed to be protected, to wit: The owner's interest.

A bond is as good as the party bonded, no better, no worse: NOAH built a first class ark and did not furnish any BOND.

ESTIMATES—That conglomeration of figures compiled after long and laborious effort in trying to make the plans and specifications agree and the discrepancies of the subcontractors' bids legitimatize the exact facts of the case.

An expression of opinion which never becomes a fact on account of atmospheric and various other conditions never the same. Estimates are principally based on HOPE. Hoping that the other man will not be lower; hoping that nothing has been omitted; hoping that you will win the job; hoping that you will make a small profit.

Those things demanded accurately by architects in

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three days about something which has taken them three months to produce, generally inaccurately.

ALTERNATES—That bane of an estimator's life which is the most difficult thing to produce. Absolutely worthless, for comparison, to the architect, and which, when he gets them, he cannot understand; nor does he know what to do with them. Like the words IF and BUT, alternates are used only to condone errors or to explain "what might have been."

GENERAL CONTRACTORS—Those people who never know until they are dead whether they have made a success of business or not. Anybody can be a general contractor and generally the less he knows about the building business the more successful he is. General contractors are the real high life of a city; at least this word is continually shouted at them by everyone who ever had a dollar's interest in any building erected.

General contractors are of three classes: Good contractors are those who always agree with the architect and say YES to everything he demands and wants "whether especially shown or specified or not."

Bad contractors are those who request to be paid for legitimate extras and who endeavor to hold the architect and owner to their part of the contract.

Near contractors are those who drift into and then out of the game, but remain long enough to sting the subs, "put it over" the owner and make a dent in the "BAD" contractor's fair methods of honestly doing business.

A necessary evil who have to scratch to keep the "cootie" labor unions from biting them.

SUB-CONTRACTORS—Those poor devils who are always told by the general contractor they are high, and knowing they will be told this they submit estimates accordingly. These are the people who always lose money on every job but who somehow stay in business, and own and ride in automobiles while the general contractors walk. The most maligned part of the building industry. It always improves on architects' details by making changes in the mouldings, etcetera, and then regrets when the job is finished that it did not follow out the details in the first place.

That bunch which will talk $10.00 worth to save $2.00 and then spend $25.00 to make second hand work acceptable to the architect when first class work could have been done cheaper in the first place.

A bunch of IMPROVERS whose great slogan is "I did not figure that."

ESTIMATOR—One who spends a lifetime only to learn that the things that he did yesterday cannot be done today, for the reason that he is supposed to know not only the mind of the architect, the desires of the owner, the vicissitudes of his employer's employees, the fluctuations of the material market and the true meaning of the sentence "as may be directed" but be so gracious that he can take all the blame and get none of the praise.

A profession where accuracy is essential, yet by being accurate you never win a job.

A profession requiring the nerve of a gambler, the courage of a soldier, the bluff of a poker shark, the vision of a dreamer and the faith of a martyr.

A profession requiring three principal ideals, Faith, Nerve, and Hope, but the greatest of these is HOPE.

CONTRACTS—Something you work hard to get and which, after you get it, you wish you didn't have. Generally 15% to the good as far as the owner is concerned. A piece of paper with three or four signatures which is good if the owner has money and dies, and no good if he has no money and lives.

Not needed in writing between honest men, but sometimes used to prevent either party from changing his mind. The real value of a contract is determined by the contractor after he receives the final payment from the owner; if a profit is made it is a good contract, if a loss is the final result it is a bad one.

RUBBISH—That item which, if properly estimated, causes you to lose the job, and if not estimated causes you to lose your shirt. The bone of contention of "To who does it belong?" To who? It is that thing without which a building cannot be built, which nobody makes, nobody wants, and which costs more to remove than it does to collect. If it contains 10% of shavings it was made by the carpenter, and if 10% of dust it was made by the mason.

The only thing in a building which nobody desires to wrap up and take home.

There are never enough nails, hinges, or 2 x 4's, but always plenty of RUBBISH.

WATCHMAN—The policeman's best friend. Generally a horrible example of the grind of the building industry. The personification of honesty which even common thieves generally respect.

THE LESSEE—That party or those parties who hire the finished structure, insisting it is not the way they wanted it, not even what they expected and they can hardly use it to advantage, although they approved the plans, visited the building every day and compelled the owner to accede to their every whim and wish.

Paris Letter

The French, and above all the Parisian, architect has not found, since the war, much occasion for developing those problems to which he had become accustomed. The most common work in the architectural offices of Paris has been the apartment house of six or seven stories, with one or two flats on each floor for the well-to-do homes—three or four for the more popular quarters. For the rest of the work, an occasional villa in the country, and, infrequently, the alteration of a dwelling into business premises, or into a place of amusement; besides these, a few repairs and whatever else came to hand in the course of events.

Thus, with so many new dwellings, the town's capacity for housing found itself growing normally at the same rate as its population.

But the cost of building is such that at present it is impossible, in the construction of housing, to obtain a return on the investment of more than 2½ to 3 per cent. Under these conditions, private initiative has declined to interest itself in the building of dwellings. Moreover,

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before the authorities had thought to forbid it by law, numerous dwellings had been altered into quarters for foreign banking houses or for cinemas, whose success was assured by popular patronage. Besides this, the reconstruction of the devastated regions has for the past four years absorbed the greater part of materials and labor available.

The public authorities have therefore been obliged—as in the greater part of the countries of Europe—to find a means of providing the less fortunate classes with dwellings at a very low rental. Legislation to this end has existed since 1906, and, in Paris at least, the philanthropic societies and *l'Office public d'Habitation à bon marché* (H. B. M.) have accomplished a most interesting work, as much from the social point of view as from that of architecture. To my mind, it is in these works that during the past ten years French architecture has manifested its vitality in the most serious and durable manner.

For the rest, certain financial advantages (tax exemption) and loans from the State allow these private societies to follow the example of cities which have created bureaus for low rent housing. This movement is developing, but, for the moment, it is above all the municipal bureaus which have undertaken the large operations.

Most of the low rent dwellings erected well before the creation of these bureaus, while indicating a certain progress from the point of view of hygiene, were considered before everything from the point of view of the number of inhabitants which they could house. But, since the creation of the bureaus, the most active of these, that of Paris and the department of the Seine, saw the danger of this conception. And it established a very simple and efficacious regulation. Instead of workers' dwelling houses in which light and air had been as much reduced as the rent, it decided that the prescribed dimensions of the courts, based upon the direct view from the windows, should be one and one-half times those allowed by the City of Paris for all buildings.

So we find in Paris a curious spectacle: the low rent houses are infinitely better lighted and aired than the homes of the wealthy, at least so far as the side courts are concerned.

Aside from this, the bureaus are constantly building on large areas, and it is here that the virtuosity of the French architects, from the point of view of the plans, has been given free rein and has found happy solutions.

The results of the regulation of which we have just spoken are that the area covered by buildings does not attain fifty per cent. of the plot. The courts are almost never completely closed. The minimum direct view from the windows is ten metres. All the rooms are directly lighted and ventilated. The height of the houses is about 18 metres.

As for the arrangement of the interior, it has been based upon the following principles: a large living room, a bedroom for the parents, a bedroom for the boys, another for the girls. As a matter of fact, these houses are reserved almost exclusively for large families. But there are other classes of families: elderly households, widows with or without children, young people living far from their families, for whom simpler quarters are desirable. The average arrangement of living quarters in one of these houses approaches the following proportions:

80%	4 rooms—1 kitchen 1 W. C.	(water, gas, electricity)
	3 rooms—1 kitchen 1 W. C.	(water, gas, electricity)
15%	2 rooms—1 kitchen 1 W. C.	(water, gas, electricity)
5%	1 room	one common watercloset and one source of water supply

In general, the *rez de chaussée* on the street is used for shops. A location is provided for an infants' nursery, and a visiting physician's office is attached to it. Other utilities comprise a laundry and sometimes a drying room. Garages for bicycles and baby carriages are always provided, as well as shower-baths.

The æsthetic expression of such a program is particularly interesting. The danger, when one is building low rent housing, is to fall into monotony, into a simple parallelipipedon pierced with regular holes. In such dwelling houses, where all the apartments are similar, it is impossible to set up a home possessing the complete originality of the individual house, but there must be sufficient latitude to give each household the sense that its own hearthside is not exactly like that of its neighbor, where the evening is often spent.

To avoid this stumbling block, the architects have few resources at their disposal, for the cost of building houses is a primordial question. However, the results obtained are altogether remarkable.

Since the number of stories is fixed at six, besides the *rez de chaussée*, a dominating outline can scarcely be obtained. But in utilizing bay windows, a liberty permitted by the building laws, a certain movement of the façade has been obtained. The color of the materials likewise gives a sufficient variety. Architects are recommended to contrive to create types of houses demanding the least possible maintenance. In addition, most of the façades are of rough stone (generally obtained from the demolition of the fortifications of Paris), of red brick, of white silico-calcareous brick, with some portions in cement, often ornamented with touches of red granite.

The architects are generally chosen in competition; the winner is charged with the execution of the group which was the object of the competition. But those who have thus acquired experience are becoming specialists, and, in Paris, *l'Office public d'Habitations à bon marché* has ended by establishing a staff of the first order.

Infrequently, for a group of buildings, all the architects collaborated on the same work. The result has been most remarkable, as much from the point of view of utility as from the practical aspect. But this was only possible among architects who were united by close bonds of friendship and purpose, a condition not difficult to meet in France, where the greater part of the leading architects in the competitions come from *l'Ecole Nationale des Beaux Arts.*

It seems interesting to say a word about the cost of such housing. In practice, it varies between 3,500 and 4,000 francs per square metre, built six stories high in

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addition to the *rez de chaussée*. The same cost obtains for the courts. It would be useful to compare, in different countries, construction costs and, likewise, to compare the rents which—considering their income—might be asked of the occupants.[1] In a country like France, the amount of income spent for housing varies noticeably according to the region. A household of Parisian workers, before the war, rarely spent more than 500 to 600 francs per annum for rent. Many contented themselves with being badly housed for 300 francs. Today these rents have increased a maximum of but 75%, by reason of the rent laws. In the north of France, however, the weavers' households rent a small house for 3, 4, 5 or 6 francs a month.

[1] The interested reader may turn to the Report of the New York State Housing and Regional Planning Commission, reviewed on page 84 of the JOURNAL for February, 1924.

It is so, perhaps, that the industrialists seek to hold workers in their towns. But I am convinced that the French worker has not yet become aware of the importance of housing in relation to the health of his family. In this respect, the example set by the low-rent municipal housing bureaus will be fertile; children brought up in good environments will later instinctively seek them for themselves. They will consent, to obtain this object, to the necessary sacrifices of money, and they will expend upon housing a portion of their wages which, far too often at present, goes for unæsthetic or even unhealthy pleasures.

Here we see the considerable influence which architecture can have upon public morale and welfare, and it should make us proud of our profession.

February, 1924. G. F. SERBILLE.

The Secretary's Page

The Executive Secretary and the Secretary had a wonderful idea the other day. It occurred to them that the very best place to look for material for the Secretary's Page was in the Chapter reports. Here the Secretary would find the things the various Chapters were doing, would pick out the things of special interest from this or that Chapter which seemed noteworthy and spread them in the Page for the benefit of all. Let's see, there are 53 Chapters, and the reports would probably average not over two pages in general. Well, the Secretary reads rapidly, and to read 100 pages of interesting matter a month might not prove too heavy a burden. Incidentally, the Secretary remembered that some of the Chapters held but one meeting a year, and most of them probably eased up during the summer months. So the Executive Secretary promised to send them all on as soon as received.

But something has gone wrong with the reports. The collection received since last November totals the mighty sum of nine different Chapters. Please let me know, Mr. Chapter Secretary, if I have neglected to put your Chapter on the Roll of Honor in the following reports:

ALABAMA CHAPTER: Annual Meeting held at the Hotel Tutwiler, Birmingham, at one in the afternoon. Interest and activity in Chapter and Institute Work shown. Prizes at the Department of Agriculture, stimulating the Engineers to follow suit. A. I. A. Public Information Committee articles in the papers. (Fine business.) Committee appointed to see what the Chapter could do in an advertising campaign in the papers. A cheerful note throughout all the proceedings. Three pages.

CENTRAL ILLINOIS CHAPTER: Annual Convention, at Peoria. Business in the morning, a delightful luncheon at the Country Club, with the ladies, followed by talks from the First Vice-President of the Institute and Mr. Fox, and a memorable dinner at The Jefferson, with enthusiastic discussion following the speeches of the evening by James M. White and Mr. Frank E. Davidson. Page and a half.

CHICAGO CHAPTER: Reports of November meetings of Executive Committee and Chapter totaling five pages. Chicago has a pleasant habit of doing most of its business in Executive Committee, and at the Chapter Meetings having a worth-while guest of honor who makes the talk of the evening. I recommend it to those Chapters with a large enough membership to insure worth-while meetings for the visiting speaker. The Chicago Chapter is on the job.

IOWA CHAPTER: A delightful seven page report of the annual meeting last Fall. Iowa holds but one meeting a year but it makes that one worth-while, a two-day session. The Executive Secretary-Treasurer of the Chapter has just issued a notice to all the Chapter members that exudes such a worth-while spirit that I am tempted to quote. After the announcement of the Committee personnels he says:

"It is earnestly hoped that we, as Architects and members of the American Institute of Architects, may make our organization more of an influence in the life of our various communities throughout the state during the coming year.

"This is a good time of year to take an inventory of our qualifications as Architects, of our purposes and aspirations, and of our relations to our fellow Architects. Let us take such an inventory and resolve to increase and improve our 'stock in trade' during the year 1924. Let us also resolve to take an increased interest in the Chapter organization and to assist in all possible ways, either by Committee work or by suggestions or otherwise. Your officers alone can accomplish very little of what we should accomplish without the cooperation or at least the moral support of the rank and file of the membership. Give some thought to what you think should be done by the Iowa Chapter and communicate those thoughts to your Chapter officers or the proper Committee men."

KANSAS CITY CHAPTER: Monthly reports come in with great regularity from this Chapter. Thanks, Mr. Secretary. Annual dues were set, after proper procedure, at $18 for resident members and $10 for non-resident

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members. Interesting talks were given on other than straight architectural or Chapter business, such as landscape architects' work, sculpture and model making. One to three pages per meeting.

NEW YORK CHAPTER: November meeting with 79 members present. New York also does most of its work in Executive Committee. Held a Regional Conference in February. Has laid out a complete program for the winter which looks interesting and worth while. I have mentioned the attendance at the New York Chapter meeting because it would seem good to most of the Chapters. I notice, however, that it does not seem good to them and they are working over that difficulty like all the other Chapters. Three pages of terse items.

RHODE ISLAND CHAPTER: October meeting. Very brief; but one page. I judge a very valuable talk from Mr. H. H. Kendall on the Court House Competition and Institute matters. It too has an Executive Committee that works for the Chapter.

WASHINGTON, D. C., CHAPTER: Some delightful notices of meetings by the Secretary, Mr. H. F. Cunningham. And I am told that they bring forth the membership at the meetings. The Chapter has published a printed pamphlet containing the minutes for the year 1923. Since H. F. Cunningham is the Secretary you can imagine, possibly, what good reading this little pamphlet offers. And incidentally it shows results in the Chapter activity and interest that set an example to all.

WASHINGTON STATE CHAPTER: Reports come in regularly. The last is the 295th and Annual Meeting. Its close touch with Canada has brought up the suggestion that the Schedule of Charges be made a matter of law with them as it is rapidly being made throughout Canada. The meeting was an all-day session. Mention made of a valuable special fund, and it might be interesting to know how it happened. Reports on the Small House Service Bureau and its progress, relations to draftsmen, and others were read. It was voted that a simple ceremony should be adopted by the Chapter giving the outgoing President a gavel inscribed with his name and the term of his office. Some very delightful talks on quite varied subjects closed the meeting. Three pages.

So much for the individual reports as received. I hope in the future the Secretary will have more to cull from. Thanks to the noble few who have not forgotten that part of each Secretary's job is the forwarding of minutes to the Octagon. Please note (See Item 3) that all communications to the Secretary should go to Washington unless specifically asked for otherwise.

One notes in running through the minutes that there is still an undercurrent of discussion about the schedule of charges and the proper fee, and a surprisingly large amount of discussion about irregular competitions for public and private work. This latter bone of contention is not peculiarly architectural, but is even more prominent in some parts of the field of our near relations, the engineers.

The Secretary attended the Annual Convention of the Minnesota State Convention of Architectural and Engineering Societies. It was discussed there quite thoroughly. The fact that Public Boards must do their own selecting and cannot delegate such authority to any other body, even if they would, was clearly brought out. Also the fact that Architects or Engineers should be judged as to their ability by their peers. And a resolution was passed authorizing the Board of Directors of the Federation, if on further study it was deemed advisable, to offer the free services of architects or engineers to any public body in the state for the purpose of passing on the qualifications of all architects or engineers applying for work and thus giving such public body a reliable list of applicants from which to make their choice. A thought worthy of study by the different Chapters and the Institute.

Industrial Relations

There has been a good deal published recently in professional journals with regard to the excellent work being done by the Associated Tile Manufacturers in their scheme of training tile setters. Under the guidance of Mr. F. W. Walker the admirable programme of the tile manufacturers has been under way for some years. It includes a scheme of scholarships to apprentices who are trained at one central school and an admirable system of text-books developed from the experience gained by that training. At the recent meeting held in Washington under the auspices of the Federal Bureau for Vocational Training the developments of this particular training of craftsmen in the tile industry were the most suggestive presented to the delegates representing all the crafts in the building industry.

MR. D. Knickerbocker Boyd of the Committee on Industrial Relations is making a trip along the west coast during the month of February and consequently will be able to meet with groups of architects and contractors in various coast cities. As a consequence the Congress scheme will once more be presented for the consideration of the building industry in these cities. The Chairman hopes that the good example of Portland and Seattle may be followed by San Francisco and Los Angeles. It must be recognized that the problem is difficult because of the spread of the open shop movement. In those cities of the East where the apprenticeship training scheme has been started under the auspices of the Congress movemust be recognized that the problem is difficult because of crafts, and it is difficult to see how unorganized workers in open shop towns can be made to co-operate effectively. It is, however, so generally recognized by the building industry that one of its chief problems for some time to come is going to be the matter of training competent craftsmen, that any plan that can be devised to attain this result ought to be encouraged.

AN interesting move has recently been made by the Credit Association of the Building Trades in New York. This Association for the last eighteen years has confined its activities to the question of financial credits as between contractors and sub-contractors. A group of leading architects in the city was recently approached by the builders with the suggestion that the functions of the Credit Association be enlarged in a direction which

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would be of importance to the architects. The suggestion was made that not only shall investigations and reports be issued as to the financial credit of contractors and sub-contractors, but also as to the integrity, ability, plant equipment and general skill of contractors. For this purpose, of course, the co-operation of architects is necessary. The plan has seemed to meet with the approval of the groups of architects consulted, and quite a number are joining the organization for an experimental year during which there is to be interchange of information along these new lines. If the experiment works the plan will probably find active support in other communities.

THE Labor Publishing Company in England has recently issued an extremely interesting book entitled *The Builder's History,* by R. W. Postgate, dealing with more than a century of the organizational activities of the building trades in England. This historical review of the development of craft unions in England is very suggestive. The building world in England of almost a hundred years ago had the same difficulties which are met with in this country today. The Chairman of the Committee on Industrial Relations believes the book merits a special review so as to call it to the attention of the members of the Institute, and by next month it is hoped the JOURNAL may publish such a review.

R. D. K.

Registration

The bill introduced by the Members of the Washington Chapter of the American Institute of Architects, for the consideration of the Senate and House of Representatives, creating a Board of Examiners and Registrars of Architects for the District of Columbia, is a carefully drawn measure. The argument presented by the Washington Chapter in favor of its enactment is rather conclusive and presents logical reasons for the adoption of good registration laws in general.

While it would seem to be better protection to public safety if the design and superintendence of all classes of structures, including bridges, buildings, etc., should be confined to registered architects and engineers, the difficulties in the path of such legislation make it advisable simply to protect the use of the title "architect" or "engineer." While civil action at law in cases of personal injuries holds against the owner of the structure, criminal action seems to fail because of the difficulty of proving criminal negligence or intent. In the case that an owner does not employ a registered architect or engineer to plan and supervise his building he should be held criminally liable in case of personal injury or loss of life. The burden of proof as to the competency of such person as he may employ should rest on the owner by law.

If the owner does employ a registered architect or engineer to design and supervise construction, the criminal responsibility should rest on such architect or engineer. The owner is relieved in such a case because the professional man employed by him has had his qualifications passed upon by men presumed to be competent.

The fact that there is a local authority conducting governmental inspection should in no way relieve the owner or the architect or engineer from criminal responsibility in case of failure in construction except where such local authority becomes a party to criminal negligence by approving faulty structural design aside from supervision.

While such laws as that proposed for the District of Columbia do not and cannot place criminal responsibility, they can open the way to a definite procedure by which such responsibility may be placed. Registration laws surely involve a very serious responsibility. The findings of such Boards, acting under the law, constitute a menace to or protection of life. When a certificate to practice is granted and incompetency of the person to whom it is granted follows and results in loss of life, the Board is at least morally responsible to an extent because it is supposed to be competent to pass judgment on the ability of others. Incompetency in medicine is hidden in the grave, in law it is reviewed and checked to an extent by the courts, but in architecture and engineering it is directly placed and broadcasted to the world.

WILLIAM P. BANNISTER, *Chairman.*

Competitions

The Government of Australia seems to have set an unprecedented example in announcing that it proposes to compensate the competitors who prepared submissions for the competition for the design of the Permanent Parliament House at Canberra. It was in July, 1914, that the competition was announced but it was withdrawn in September of the same year owing to the outbreak of war. It was revived in August, 1916, but was indefinitely postponed in September of the same year. Now the government declares its policy, in respect to Canberra, to be one of awaiting more favorable conditions, but it also proposes to make a sum of money available for compensating those contributors whose work on the competition had involved an expenditure of money. It has accordingly notified the competitors of its intention and has formulated a plan for alloting compensation. The method of procedure has received the approval of the Australian Institutes of Architects and the example ought to be one toward which the architectural profession may point with appreciation and gratitude.

IN THE case of the announced competition for the Palace of Justice at Cairo, Egypt, the Royal Institute of British Architects has forbidden its members to participate. On learning of this action, the American Institute of Architects, through its Secretary, cabled a request that the program be changed to accord with the International regulations for competitions, but was advised that, as the invitations had been issued, no changes in the program were possible. The Institute therefore advises its members against taking part in this competition.

THE NEW COURT HOUSE COMMISSION created by the Legislature of Rhode Island has held the competition for the new Court House in Providence, and it is announced that the winner is the firm of Jackson, Robertson & Adams of Providence. The second prize went to John M. Howells and Raymond M. Hood, Associated, of New

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York, and the third prize to Eleazer B. Homer & Gordon Henshaw, Associated, of Providence.

Under the terms of its creation the Commission had not the power to include in the program the usual clause by which the winning of the competition automatically concludes the contract for the design, but the owner agreed to allow no one to whom it would not be willing to award the commission to enter the competition. The General Assembly is the final authority.

The report of the jury praises the high excellence of the submissions. The architectural advisor was Mr. Henry H. Kendall, P.P.A.I.A., and the secretary of the commission, Mr. John Hutchins Cady. The members of the jury were Messrs. Jesse H. Metcalf, J. Jerome Hahn, William Emerson, Charles Butler, and Norman M. Isham.

WILLIAM L. STEELE, *Chairman.*

Contracts

The Committee cannot of course report any such range of activities as characterized the earlier work of the Committee, when the uniform contract documents were in process of being formulated. It can, however, say that it is kept fairly busy in answering requests for interpretation of the provisions of the documents. These come from all over the country, and from architects who are members of the Institute as well as from those who are not. The tenor of the questions is very friendly, indicating that the wide use of the documents has proven generally satisfactory.

Changes in certain provisions of any standard documents must inevitably occur in contracts drawn by individuals. The Chairman of this Committee, undertaking its work as he did, was somewhat unequipped by previous experience, but he is thoroughly convinced of the value of the work done by those Institute members who framed these documents and of the very wonderful manner in which they succeeded in making a document so widely acceptable. The value of their service to the Institute, and hence of the service of the Institute to the architects in general, is inestimable. Later, the Committee hopes to offer a digest of some of the more interesting questions raised during the year as they have involved provisions of the documents.

EDWIN BERGSTROM, *Chairman.*

Public Buildings

On 30 January last there was introduced by Mr. Smoot in the Senate a bill (S.2284) providing for the construction by the Public Buildings Commission in the City of Washington of buildings for the Bureau of Internal Revenue, Department of Justice, General Accounting Office, Department of Agriculture (completion of present main building on the Mall), National Archives, General Supply Committee, Department of Commerce, Department of Labor, Interstate Commerce Commission, and other various governmental activities. The bill authorized the Public Buildings Commission to make preliminary studies of needs, designate sites, and allocate the preparation of plans, execution and supervision, among "such qualified agencies of the Government" as it may deem desirable, the plans to be subject to the approval of the Commission.

The sum of fifty million dollars is asked for, not more than ten million of which is to be available in any fiscal year.

Competitions were held for three departmental buildings a number of years ago, some 20 architects participating in each of the competitions, representing the work of 60 architects in all. These were examined by juries appointed by the Treasury Department and awards made to distinguished architects in each case. While the conditions have changed somewhat and the same buildings in each case will probably require further study, it is to be hoped that the Commission having in charge the expenditure of these funds, if appropriated by Congress, will recognize the moral obligation to connect their procedure as closely as possible with the original movement at the point at which the original procedure ceased functioning.

MILTON B. MEDARY, JR., *Chairman.*

Pre-Convention Notes

NOMINATIONS. For the office of President, Mr. Milton B. Medary, Jr., of Philadelphia has been nominated by members from the following Chapters:

CHICAGO: Henry K. Holsman, G. C. Nimmons, Clark C. Wright, Richard E. Schmidt, Martin Roche, J. C. Llewellyn, Robert C. Berlin, John A. Armstrong, John A. Holabird, Hugh M. G. Garden.

IOWA: Eugene H. Taylor, W. J. Brown, Harry E. Hunter, C. B. Zalesky, Charles B. Anthony, Herbert B. Rugh, Seth J. Temple, P. T. Burrows, R. J. Clausen, Arthur H. Ebeling, William L. Steele.

KANSAS CITY: Albert S. Owen, Arthur D. James, Wm. H. Sayler, Courtlandt Van Brunt, Arthur H. Buckley, Elmer Boillot.

NEW YORK: Charles Butler, Robert D. Kohn, Clarence S. Stein, Frank E. Vitolo, Frank H. Holden, Burt L. Fenner, Teunis J. van der Bent, Lionel Moses, George S. Koyl, Gerald A. Holmes, John A. Thompson, H. Van Buren Magonigle, James Otis Post, William Sydney Wagner, William S. Post, D. E. Waid, R. H. Shreve, William F. Lamb, Theodore E. Blake, C. Grant LaFarge, Louis Ayres, Henry Bacon, Donn Barber, Jerome R. Allen, Frank Goodwillie, Wm. Edgar Moran, Ely J. Kahn, Wm. Adams Delano, Julian Clarence Levi, Albert Buchanan, Egerton Swartwout, J. M. Montfort, Electus D. Litchfield, Arnold W. Brunner, Albert S. Gottlieb, John A. Gurd, R. H. Hunt, Joseph H. Hunt, Bevan Jones, R. T. Walker, Andrew C. McKenzie, Paul Gmelin, Henry C. Hahn, Leroy P. Ward, J. Lawrence Aspinwall, Fitz-Henry Faye Tucker.

NEBRASKA: Charles W. Steinbaugh, Frederick W. Clarke, Frederick S. Stott, Louis W. Smetana, Thomas R. Kimball, Harry Lawrie, Edwin B. Clarke, John McDonald, J. D. Sandham, Alan McDonald, James T. Allan, N. S. Wallace, George B. Prinz, H. A. Salisbury, Mark M. Levings, L. J. Prestwich, Charles A. Carr, N. R. Brigham, F. A. Henninger, James R. Webster.

OREGON: O. R. Bean, Ellis F. Lawrence, Frederick S. Allyn, John V. Bennes, Charles D. James, Morris H. Whitehouse, W. G. Holford, W. R. B. Willcox.

PHILADELPHIA: William J. H. Hough, Howell Lewis Shay,

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Edward E. Hendrickson, G. Edwin Brumbaugh, Wilson Eyre, Percy Ash, John F. Harbeson, William D. Hewitt, Albert Kelsey, Almeric C. Howard.

SAN FRANCISCO: J. S. Fairweather, Harris C. Allen, Walter D. Bliss, Albert J. Evers, George B. McDougall, Earle B. Bertz, John Reid, Jr., Morris M. Bruce, Wm. C. Hays, Edwin J. Symmes, E. G. Bolles, George W. Kelham.

ST. LOUIS: John Lawrence Mauran, Ernest C. Klipstein, Wm. A. Hirsch, E. J. Russell, Walter L. Rathmann, J. N. Watson, Wilbur T. Trueblood, Louis La Beaume, Eugene S. Klein.

WASHINGTON, D. C.: Delos H. Smith, Frank Upman, R. F. Beresford, L. Justement, J. R. Marshall, Harry F. Cunningham, George O. Totten, Jr., T. A. Mullett, Arthur B. Heaton, J. Wilmer Smith, Horace W. Peaslee, Ward Brown, P. C. Adams, Julius Wenig, L. M. Leisenring, Joseph Younger, William Douden.

WASHINGTON STATE: A. F. Menke, W. G. Brust, C. A. Merriam, David J. Myers, F. A. Narramore, Charles H. Alden, James H. Schack.

For the office of Treasurer Mr. D. E. Waid has been nominated by the above members of the Kansas City and St. Louis Chapters.

FOR the office of President, Mr. D. Everett Waid of New York has been nominated by members of the following Chapters:

NEW YORK: Harvey W. Corbett, Edwin H. Denby, Chester H. Aldrich, John V. Van Pelt, H. O. Milliken, Walter D. Blair, Albert E. Flanagan, Chas. A. Platt, Philip Sawyer, F. L. Ackerman, Ely J. Kahn, Wm. F. Lamb, Wm. S. Post, W. Sydney Wagner, Chas. Ewing, Jerome R. Allen, Lyman A. Ford, Wm. O. Ludlow, Benj. W. Morris, Lionel Moses, Lawrence G. White, Walter B. Chambers, Julius Gregory, Thos. Hastings, Theo. E. Blake.

PHILADELPHIA: Clarence W. Brazer.

CHICAGO: F. E. Davidson, Joseph C. Llewellyn, H. B. Wheelock, Chas. E. Fox, Emery S. Hall, Ralph C. Harris, Leon E. Stanhope, Robt. C. Ostergren, H. H. Waterman, Chas. H. Prindeville, Clark C. Wright, H. W. Tomlinson, J. M. Hoskins, Elmer C. Jensen, John E. Youngberg, N. Max Dunning, Arthur Woltersdorf, Geo. W. Maher, Robt. C. Spencer, John R. Fugard, Benj. A. Horn, John A. Nyden, G. P. Lagergren, John W. Weiss, Morris G. Holmes, Geo. W. Carr, M. C. Chatten, E. H. Clark, I. K. Pond, Philip B. Maher, Albert M. Saxe, Howard L. Cheney, Robt. G. Dwen, Gardner C. Coughlen, F. J. Teich, J. C. Bollenbacher, C. H. Walcott, Howard Shaw, Geo. G. Elmslie, H. V. Von Holst, J. S. Van Bergen, A. S. Pashley, Pierre Blouke, F. J. Ellert, S. M. Peterson, Russell S. Walcott, E. H. Bennett, Clarence W. Farrier, R. C. Llewellyn, Jos. Nadherny, Scott C. Dyer.

CENTRAL ILLINOIS: H. E. Hewitt, F. N. Emerson, Warren W. Day, B. L. Hulsebus, L. Eugene Robinson, Robt. J. Hotchkiss, Mark L. Whitmeyer, Geo. H. Davis.

NEW JERSEY: E. H. Fougner, Jas. O. Betelle, Harry T. Stephens, Warren C. Pattison, Geo. S. Drew, Marshall N. Shoemaker, Neil J. Convery, Gilbert C. Higby, Hobart A. Walker, Bernard E. Jamme, Henry Baechlin, Seymour Williams, J. C. Van Vlandren, Frank A. Cutler, F. W. Wentworth, Fred J. Vreeland, Cornelius V. R. Bogert.

BROOKLYN: Frank J. Helmle.

Public Information

The Committee has met with a most encouraging response from several Chapters in the matter of local newspaper publicity.

BALTIMORE: Articles of the greatest interest are still being published in the Evening *Sun*, mostly written by Mr. John Henry Scarff.

DAYTON: "The Architects' Corner" of the leading Dayton Sunday paper is due largely to the activity of Mr. Walter G. Schaeffer and to the journalistic efforts of members who have written articles entitled *Charm in Design and Atmosphere, An Architectural Tour of Dayton, American Architectural Heirlooms, Fitting the House to the Site, Home of the American Institute of Architects,* with a cut of The Octagon House, *Architecture in Your Own City, Selecting a Home Building Site,* and one describing the typical architect's drafting room. All of these articles are attractively illustrated.

The Chapter has also arranged for a series of illustrated talks by representatives of the various manufacturers whose products enter into buildings. The Chapter has under discussion the compilation of a Chapter Cubiture book in which will be recorded all cost data on all work done by members, the information to be open to all members for guidance in preparing estimates.

SCRANTON - WILKES-BARRE: Sends in a valuable set of clippings, some of which relate to Institute material and some to that of local authorship.

DAYTON, GEORGIA, SOUTH CAROLINA, MONTANA, NEW YORK, MICHIGAN, ALABAMA, SCRANTON-WILKES-BARRE, COLORADO, SAN FRANCISCO, NORTH CAROLINA, SOUTHERN PENNSYLVANIA and PHILADELPHIA are publishing Institute material so that it has been disseminated throughout the country. The Committee has received most encouraging reports, for some Chapters have found the material so well accepted by the press and public of one part of their territory that they have obtained simultaneous publication by another newspaper in another part of the state.

NEW YORK: Mr. William Harmon Beers of New York City has arranged to broadcast a series of talks on Architecture. We have no knowledge of this having been tried elsewhere, save in London, but would like to be advised. If it were done from some of the Central, Southern and Western broadcasting centers, information could be disseminated very broadly. The Public Information Committee has made definite arrangement with a paid publicity agent, in conjunction with a similar move by the Architectural League of New York, the same agent being used.

KANSAS CITY: Has been making a drive to induce newspapers to mention names of architects of whose works they publish reproductions or notices, and has interested itself in the Lathrop Trade Schools, where boys study the intricacies of our modern building industry. Mr. Ernest O. Brostrom, the energetic Chairman of the Chapter's Public Information Committee, has also sent out a request for speakers for the Trade and High Schools.

MONTANA: Has held a Competition among members for small country schools and intends to produce a program with drawings and bills of materials which they will send to the Board of Health and State Board of Education for approval. Thereby they hope to improve the character of country schools. They expect to hold their summer meeting in Missoula and at that time to

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have an exhibit of drawings by architects of the State, it is reported.

OREGON: Is taking active part in the Association of Building and Construction, especially in regard to their Guild of Handicrafts, apprenticeship, and a Code of Ethics for the Building Industry.

VIRGINIA: Has made an effort to arrange lectures for the public schools in Richmond.

SAN FRANCISCO: Is securing publication of Institute material at such times as the newspapers have space, and will hold an exhibition at the Bohemian Club 7-12 April. There has been no exhibition since 1916 and the local Club and Chapter intend to make this one representative of the best work of the profession.

ST. LOUIS: Has initiated activities for the formation of a Small House Service Bureau, and has been active in the St. Louis Building Congress of which Mr. George F. A. Brueggeman, a Chapter member, is President.

ARKANSAS: Is establishing a studio of local draftsmen who may work out the Beaux Arts Society problems.

BUFFALO: Has secured quarters for Chapter use known as the "Rectagon," and has installed an atelier which will do the Beaux Arts Society problems.

COLORADO: Has been successful in obtaining publication of notes about its members and their activities.

CONNECTICUT: Has had articles printed from time to time in the *Commercial Record* and other local papers. Its Committee on Legislation is working on a bill for state registration.

TOLEDO: Reports an interesting ordinance passed in that city, requiring the payment of an annual tax of twenty dollars or more for architects. No plans or specifications will be approved by the Building Commissioner until the tax has been paid.

UTAH: Has arranged an exhibit to be shown in connection with the various Chapters of the eighth and ninth districts during early February at Los Angeles and in early March at Salt Lake City.

WASHINGTON, D. C.: Has interested itself in the enactment of a registration bill in the District of Columbia. The Home Beautiful Section of the Washington *Post*, created through the activities of the Chapter's Public Information Committee, has been so successful that the paper is to increase it to an eight-column section and has asked Mr. Cunningham, the Public Information Chairman, to furnish weekly articles on the Design and Building of the Home and the Treatment of the Home Grounds.

It would be of the greatest use to the profession if each Chapter would organize a "Vigilance Committee" to watch for references to architects' work in which their names are not mentioned. The Committee could then bring the matter to the attention of the editor and some progress might be made in awakening the public to a realization that the architect has a right to such notice.

With the special approval of the Board of Directors of the Institute Mr. James T. Grady has been employed as publicity agent for the forthcoming Convention. Mr. Grady has in hand the publicity for Columbia University, the American Engineering Council, the Carnegie Endowment for International Peace, and others. He also had charge of the publicity for the University of Louvain.

JOHN V. VAN PELT, *Chairman*,
126 *East 59th St., New York City.*

The Development of Washington

In the November, 1923, issue of the JOURNAL there was published a statement concerning the organization of the Washington Committee of 100, whose object was a study of the needs and the growth of the Nation's Capital. The Washington Committee has just issued its first report and from the section on "Architecture and Its Relation to the Nation's Capital"[1] we quote the following:

The General Situation

It might be presumptuous to say that Washington is now the most beautiful capital city, but it is not presumptuous to say that there is no reason why Washington may not become the most beautiful and the most convenient. Of all the world capitals this one alone is distinctive in having a really great preconceived, coordinated plan for the grouping of its public buildings with all the needed setting of avenues, plazas, parks and mall.[2] The greatest handicap that Washington struggles against is the negative attitude toward æsthetic considerations—the wide latitude given for attacks upon the great plan, the unwarranted departures from it, the lack of positive restraining or prescribing authority, the substitution of so-called "common sense" for technical knowledge and architectural ability.

For any real accomplishment toward the ultimate greatness of the city—real civic greatness—certain general prerequisites are submitted:

(a) That, if Washington's primary purpose is to be the national capital and, as such, an age-long expression of American ideals, every possible means should be taken to prevent the erection of any structure—public, semi-public or private—which will, by virtue of position, construction or design, detract from the appearance of the city.

(b) That, if the capital's buildings are to qualify as national monuments by which our culture and art understanding will be judged, they should be placed only in the hands of masters—not men of average training, but the ablest men in their profession; that adequate compensation, comparable to private practice, should be paid architects in Federal employ to attract and hold men of high ability; that appointees to such named technical positions shall be men of sound professional training.

(c) That, if the city is to show a well-balanced architectural development, private buildings which constitute the greater part of the city's construction should be entrusted only to trained men; that there should be enacted a carefully considered Architects' Registration Law such as half the states have already passed for their own protection, such as is proposed for engineers and such as maintain the standards of medicine and law. Such a Bill has already been introduced in the Senate of the United States [S-933].

[1] Horace W. Peaslee, *Chairman*; James Rush Marshall, William D. Hoover, Walter G. Peter, John Temple Graves, John Poole, L. P. Wheat, Jr., Frederick Brooke.

[2] The Committee has unintentionally overlooked Canberra, the new capital of Australia, which has a plan basically more far-reaching than that of Washington.—EDITOR.

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(d) That to raise the standards of private building and to prevent a "boomtown" appearance in the national capital, the full force of every Government agency, of all financial interests, of educational publicity and of nation-wide moral pressure should be exerted to impress upon private interests their responsibility to the nation; and that the work begun by the local architects in forming a co-operative Architects' Advisory Council, paralleling with private buildings the work of the Fine Arts Commission with public buildings, should be extended in co-operation with the Commission.

(e) That supervision, co-ordination of effort and continuity of policy is essential to the development of a great plan; that the Commission of Fine Arts, composed of some of the ablest men in the professions of architecture, landscape architecture, sculpture and painting, all of whom have given largely of their time and service without compensation for a dozen years, have demonstrated to the satisfaction of their professions their ability to produce results worthy of the nation; but limited advisory powers cannot be productive of the best results unless supplemented by some positive authority.

Therefore, it is believed that the time is soon approaching when a central supervisory planning authority should be set up which can employ as needed for positive and constructive effort the ablest men of the country, men equal to those who served so well under the McMillan Park Commission of 1901.

The Architectural Side of Certain City Problems

The divers needs of Washington are covered in detail in companion reports, but the following brief resume, taking for granted a great many fundamentals, calls attention to certain architectural elements of these subjects, as expressing in a nation's capital a nation's calibre.

Schools: Americans are essentially a "practical" people. If we are again to have a "working appreciation" of the Fine Arts, which was considered an essential part of a gentleman's education in Jefferson's day, we must acquire it subconsciously. Therefore, schools which reach the most impressionable age should be more than mere brain factories. Washington has not even enough essential plants. Nothing will go farther in helping to raise the standards of taste in the private buildings of the capital than instilling an appreciation of good architecture into the rising generation.

Parks: Our natural parks surpass those of every other capital, but we lack fine public gardens with monumental park structures equal to those of Rome, Paris, Vienna and other Old World cities. Washington has in the Mall a great opportunity for the creation of a really fine formal park, but at the present rate of progress it will take many years to complete it. Washington has shown the world for several years two wings of its only field-house for sports without its connecting center. Such a dilatory program does not seem up to our national standard of doing things.

Streets and Highways: In-town avenues demand formal treatment: picturesque sections call for informal treatments. Yet we find on our main streets, contrasting architectural and landscape vagaries, various types of patent fencing or balustrades, high terraces and sunk basement entrances: in the suburbs, where such variety might add interest to detached houses, set among old trees, we shoot the street lines with a transit, cut down the trees, scoop off the hills and fill the valleys. The world is literally turned upside down.

Washington can never evolve such distinctive residential sections as Roland Park, Forest Hills Gardens, the Country Club District, or any one of a hundred other well-known splendid developments from Back Bay to Berkeley unless something is done to save fine settings for residences.

Metropolitan Extensions: Today it is easy to foresee a great metropolitan extension into Maryland and Virginia. The architectural concern for both safety, convenience and appearance is early co-ordination of State and District zoning and building regulations to prevent the repetition in Greater Washington of earlier errors beyond Florida Avenue.

Waterfront: In the cities of the Old World the most beautiful treatments are along the waterfronts—the Bay of Naples, the Seine, the Arno, the Bosphorous, at Venice and Geneva. Washington has as great opportunities as any other capital and no impossible conditions to meet. From Budapest, Algiers, London, can be drawn ample precedent for treatments combining the practicable and the beautiful. Likewise, in the matter of bridges, we should regard noble precedent. A bridge is more than a street extension, and an inadequate approach may injure a noble structure. For lack of adequate planning in the case of the Francis Scott Key Bridge approaches we have already forfeited one of our greatest opportunities.

Housing: The national capital is being largely developed by speculative interests for a quick return, with monotonous, undesigned, repeat-type row fronts which stamp individuality out of human beings and mediocrity upon sections. There is no need for such imposition on the nation's capital or upon its residents. Variations in roof and parapet lines; in porches, terraces and hooded entrances; in court treatment and set-backs—all are feasible and of inconsequential cost. When individual cities can correct such evils, have the people as a whole no protection?

Industrial Development: Stores and factories are necessary, but they also should be subordinated to the idea that this is the nation's capital—the prime purpose of which is to be a noble seat of government. Every known industrial structure is capable of architectural treatment, so that in its very mass, simplicity and proportions, it can be made imposing, or simple and unpretentious. If promoters lack sufficient pride in their city to recognize such conditions, they should be prevented by law from intruding unsightly utility structures on the streets and in the vistas of the capital.

Zoning: Power should be extended to protect Federal buildings or prospective sites from encroachment on grounds other than public health and morals. When definite projects are long in contemplation, it is indeed short-sighted to allow Federal sites to be absorbed by private building operations or made prohibitive in cost by increased valuation. It is equally short-sighted to build a great monument, imposing in its placement, and then to allow encroachment in the immediate vicinity. It is amazing to think of a great commercial building across the street from the Capitol; of an apartment disturbing the setting of the Lincoln Memorial; of a costly panorama park with outlook blocked by an apartment house; of ugly office buildings breaking the continuity of a proposed executive square.

What American sojourning in Rome but has marveled at the majesty of St. Peters, its dome rising supreme above the city; and returning home has not thrilled again at the dome of his own Capitol radiant against the dark

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sky! Yet we are about to throw away our birthright for a mess of pottage, for nearer to the Capitol creep the tall buildings which will soon break the broad skyline above which the dome now stands supreme. Cannot measures be taken through the Zoning Commission to prevent such encroachments?

Federal Buildings: Since the capital must house the departments of the government, it has a unique opportunity to develop the definite plan for great administrative groups which the McMillan Commission wisely evolved from the L'Enfant Plan. Propinquity one to another of the government offices would make for co-operation and the treatment as a whole would be an imposing example to other cities. Although plans have long been prepared for the new homes of the various Departments, the group developments have been at a standstill and the Departments in question have taken root elsewhere in scattered buildings of no great merit and in no way part of any general scheme, at a rental cost which would go a long way toward the construction of government-owned buildings. It would indeed be an unfortunate outcome if the offices of the government were to remain indefinitely in second and third-rate structures with nothing of the dignity and distinction, the monumental expression of large affairs that should attach to Federal buildings and distinguish them from buildings for private purposes. And there is a scathing indictment of small vision in the invasion under cover of war-time needs, of one of the nation's most noble structures, the Lincoln Memorial setting, with two huge concrete office buildings protruding their unsightly "gridiron" across the roadways of the Mall. Government buildings should be provided as needed according to a definite plan and under a definite supervision to prevent repetition of either over-ambitious or shamelessly ignoble structures.

A Capital Exposition

Some or all of the foregoing may seem very involved and complicated, but the idea may be put in more tangible form by comparison of a capital city to an Exposition. Those who have seen great Expositions cannot but recall the appeal of their unity and beauty. Back of the idea were two fundamental factors: first, a great scheme of co-ordinated development; second, the collaborative effort of able men. The world comes to witness—not primarily the mere exhibits but the marvelous beauty of the great composition. Can it be "That none of all our blood shall know the shadow from the substance"? Is it not reasonable that we should devote as high talent and as careful study to the enduring capital of our country as to our phantom cities?

The Editor's Note Book

Those to whom philology has offered such a fascination as it has to me may well consider that in the not too far away future it will become ever so much more interesting than it is at present. That is, provided the records of our rapidly changing language are preserved in any form adequate for such study. Indeed, it seems difficult to imagine a field that will be richer. Not only do new words tumble upon us with baffling rapidity but, what is more important, the meanings of words are being stretched and distorted until it scarcely seems possible that we can longer communicate with each other with any degree of accuracy. What is left for the poor human who walks the streets, or rides in a public conveyance? His eye is assailed with the cunningly disguised propaganda fashioned by the hired purveyors of what they call ideas, and with the impertinence and the importunities of the makers and sellers of wares, to a point where he may well be excused if he declines to give credence to any form of words. Perhaps it is because of the dreadful word fatigue that settles upon us that Wells, in his last story of an imagined Utopia, banishes the spoken language altogether. The Utopians of his dream speak with one another telepathically and thus are able to understand their English and French visitors with equal facility. And so one sighs as one reads, and even as one writes. No newspapers, no linotypes, no rotary presses! Ah!

A forcible reminder of these things was the sign recently noted in Virginia where the enterprising Jobinson made it plain that within his ice-cart there reposed cakes of "Super Cooled Ice!" This, of course, means that he had been obliged to go Smones one better than "Colder Ice," and that Smones had been prodded by Rith, who offered "Cold Ice." Such are the simple chains of events which so rob words of their meanings and so devaluate the language that one is not infrequently dismayed. For, be it noted, the drowsy effect of it all is to lower all appreciation of quality, of true value, of intrinsic worth, of desire for simple honesty of statement, until that business standard which lazily accepts its unmoral fate as inevitable permeates and destroys.

Not long ago I noted that a progressive young firm of carpet cleaners announced that they "Cleaned Carpets Clean," while there is a legend on a prominent public building in Cincinnati which informs that it is the purpose to mete out "equal and exact justice to all no matter what their station." As a piece of tautology, that is hard to beat, but as a reminder of what has become of our one-time concept of justice, it is not comic by any means.

Architecture and the arts do not escape, for indeed the word art has so long been taken over for commercial purposes that its use is generally more canny than convincing. Perhaps one of the best examples of this dreadful game of dressing up words in the uniform of business is found in a pamphlet recently issued by the White Star Line. Seldom has such a mess come out of a print shop. It was designed to glorify the liner *Homeric* and was evidently concocted in the marvelous brain of one of those beings known as a "copy writer." But the smear of the business superlative and the slobber of the parvenu were never better exemplified. Here is the description, if you please, of the first class dining room:

"Next to the public rooms on the boat deck the most commanding apartment in the *Homeric* is the first class Dining Saloon, situated on D deck, amidships. The distinguishing feature of this room—which has seating capacity for 500 persons—is the lofty central portion, with a great inverted dome of crystal pendants, reflecting in prismatic radiance the brilliancy of hundreds of concealed electric bulbs, centered in a ceiling of white and gold.

"Along the upper half of the room, on either side, is a gallery on which open the finest private suites on the

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ship, and from which, through plate glass panels set in bronze frames and guarded by bronze rails, an impressive view of the room below may be had. A central decoration that quickly catches the eye is a large painting, opposite the entrance, representing two classic female figures, who have stepped from a boat to an island in an Alpine lake, and are about to partake of a repast spread upon the ground. A castle on heights in the background completes the suggestion of adventure."

Of course the "central decoration" is an epitome of what is commonly called "art in business." The wretched endeavor to plant two classic female figures on an island in an Alpine lake and to complete a suggestion of adventure with a castle on some heights above is a complete elucidation of the whole process that surrounds the making and the selling of far too many modern wares. Some kind friend ought to take the White Star Line in hand, not only in respect to its choice of decorators but likewise in the matter of its hired copy writers. But, alas, when the whole process of making a modern transatlantic liner is that of making it as unlike a ship as can be—of abolishing everything which might suggest that one was really on the ocean—of discarding all that was even remotely related to the entrancing lore and craft of the shipwright and the mariner, what difference does a bit of blurb decoration or a piece of blurb printing make? If the first cabin passengers on the *Homeric,* male and female, can be made happy by feasting their imaginations on the two dames on the isle and the two unseen gents beyond the moat, it might be worth a voyage—for adventure is a precious ingredient of life, not too easily come upon, and they say it should be taken when and where found.

It appears, in the light of what I have been saying, that Mr. Eidlitz's method of "de-bunking" is not alone applicable to building contracts. But the trouble is that the source of the bunk passes as easily by Mr. Eidlitz's eagle eye as by the rest of the de-bunkers. There is an almost overpowering bunk in all of man's present activities. It is a hopeful sign when he recognizes the fact. But it amounts to little unless he is willing to go on and explore. Bunk is not self-propagating. It is born of deceit. Of what then is deceit born? One does not care to enter too far into that field, but in so far as the building contract is concerned, let us get ready to recognize the underlying factors which have nothing whatever to do with the technique and craft of building and yet which now dominate and control it—the factors of Land, Credit, Interest, Profit, Rent, Inflated Unearned Increments, and the whole method of living, not by work but by owning. Poor human beings are not likely to be chided if out of this inhuman relationship they fall into the quagmires of bunk. Mr. Eidlitz's argument for the lost clause reminds me of the Frenchman who was found in the depths of some primitive wilderness. There he had set up his camp and there he lived the life of a philosopher. When his discoverers overcame their surprise and entered into conversation they ventured the remark that he had at least attained to complete liberty.

"Oh, yes," replied the philosopher, "but I am still searching for equality and fraternity."

The call that Mr. Eidlitz sounds in his Lost Clause, as it appears in this issue of the JOURNAL, is a clarion one indeed, but it falls upon ears whose owners are powerless to extricate themselves from the economic coils of our twentieth century state. That is the chief business to which man will address himself, some day, and then and not till then shall we witness very much de-bunking in any line. On the contrary, bunk is likely to flourish and prosper for some time yet.

The New York *Times,* in a recent paragraph devoted to a description of the new Savoy Hotel, permitted itself to say that disposition of certain public rooms would enable them to be used by the occupants of the hotel for social and private functions, and, said the *Times,* "only the highest type of function will be allowed." Also, in its critique of Reinhardt's "Miracle," it announced that the Century Theatre "had been lined with a cathedral." This is rather a precious pair of word contortions, but the most casual reader can discover equally precious ones in any newspaper in the land. The future of philology ought at least to be replete with humor. C. H. W.

From Our Book Shelf

An English University

The book[1] is simply descriptive text for the illustrations. The text, though very brief, contains a considerable amount of interesting details about Cambridge, and, quite apart from the drawings, is valuable.

The drawings are not good enough either as examples of draughtsmanship, or as subjects well-chosen for composition and interest, to warrant their being the excuse for the text. England has produced many draughtsmen who have done this successfully. The series of books on the counties illustrated in color show the English draughtsman at his best in water-color. In purely architectural drawing, or subjects where architecture is the chief interest, such men as Sidney Jones set a standard which few men here can touch. Yet even in these books the drawings are not the *raison d'être* of the books. In *Historic Cambridge* they are stated to be the object of the book, and as such are not really worthy of that distinction. They are such drawings as hundreds of young draughtsmen here turn out daily.

Let us turn then to the text. First, one is interested to learn (if he did not know it before) that there are twenty-six colleges at Cambridge; and of these Girton, Newnham and Homerton are for women and Chestnut, Ridley, Westcott and Westminster are theological.

The foundations are interesting as showing what a variety of people were involved in the beginnings of these colleges. Among the founders of the twenty-six colleges there is a long list of women, and these by no means modern, indicating that women long ago took an active interest in education. Christ's and St. John's were founded by Lady Margaret Beaufort in the early 16th century; Clare in the 14th by Lady Elizabeth de Clare, and Pembroke in the same century by the Countess of Pembroke. Two Queens founded Queens' in the 15th century. Sidney Sussex was founded by Lady Frances Sidney in the 16th century. Kings, Bishops, and com-

[1] *Historic Cambridge.* Pencil sketches by J. M. Delbos, with a foreword by L. F. Salzman.

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moners founded others. Sir Walter Mildmay founded Emmanuel, John Harvard's college. The foundation of Selwyn reminds one of the Emerson group here, as it was for "sober living and high culture of the mind." Corpus Christi, a 14th century foundation, was due to the two town Guilds—a strictly democratic origin.

Of the twenty-six colleges those for women and the theological colleges have no part in the University as a governing body. The University is governed by the Senate, with a distinguished non-resident head, the Chancellor, and the practical head, the Vice-Chancellor. The colleges are self-governing and practically independent, but the University confers the degrees, and all the colleges are so closely connected with the University, its governing body and its policies, as to make it impossible to know of the colleges except as a part of the University.

As a brief record of Cambridge with its dates, facts, and college coats of arms, it is a useful book in any library.

R. CLIPSTON STURGIS.

Current Activities[1]

SCIENTIFIC RESEARCH DEPARTMENT
PRODUCERS' RESEARCH COUNCIL
STRUCTURAL SERVICE COMMITTEE

Scientific Research Department

The building industry of today has become so vast and complex that the architect, instead of being able—as in olden days—to know all building materials, has become dependent on some source for definite and reliable information. Therefore, it becomes almost imperative that the architect have a point of contact with the manufacturers. This contact must be broader than mere selling interest; their mutual aim must be better buildings and the manufacturer gains by being known as a manufacturer of worthy material.

The architect offering complete service is just as anxious to know of new developments as the manufacturers are anxious to have him know. This means the dissemination of information, whether it be called advertising or something else. In the past there has been much misdirected effort and much misleading information, and it has long been evident that a substantial saving to the building public could be effected. The architects also have felt that advertising literature could be standardized as to size to simplify filing.

The correlation of efforts of all the A.I.A. committees should be handled by one body. The correlation of information on products by all National Committees should be digested for the architects by some central body.

The steady increase in the work of the Structural Service Committee demanded a paid organization to handle the work in a businesslike way. So the Scientific Research Department was created. This department not only acts on behalf of the Structural Service Committee but is the point of contact between the Institute and the Producers' Research Council and its information is available to any committee or special committee of the Institute. The only orderly way to accomplish this purpose indicated centralized records and a definite source of scientific information available for the architectural profession and the construction industry.

N. MAX DUNNING, *Chairman.*

Producers' Research Council

The Producers' Research Council is an organization of manufacturers of building materials and appliances. It elects its own officers, fixes and collects its membership dues, is self-supporting and national in scope. The Board of Directors of the American Institute of Architects has recognized the Producers' Research Council as an affiliated body.

The fundamental purpose of the Council is to promote a more technical relationship between the architect and the manufacturer. Through a closer contact with the architect and a better understanding of the kind and character of information he needs to serve his client, it is believed that selling costs will be reduced and that the value of trade literature to the architect will be increased.

As manufacturers, the Producers' Research Council is interested in many of the lines of work in connection with which the Institute is endeavoring to improve present-day conditions. For example, in promoting fair and equitable jurisdictional awards, in improving the quality of design and construction of small houses, in improving industrial relations, in education of the architectural student who will later on specify building materials, and, since the American Institute of Architects is an organized body having no financial interest in price and placing quality above price, the manufacturers of quality products have an interest in raising the standards and increasing the sphere of influence of the architect.

Through the contacts which have been established, group opinions upon questions of mutual interest from the architectural profession are made available and will be of value to the producer. It is also hoped that, through combining in one organization manufacturers of standing who represent all phases of development in building trade progress, the Producers' Research Council will be able to make available to the various committees of the Institute group opinions and suggestions that may be of value.

O. C. HARN, *Chairman.*

Structural Service Committee

Federal Specifications Board

Tentative specifications for Glass and Glazing and proposed specifications for Hydrated and Quick Lime were submitted for criticism and suggestions. These specifications were transmitted to the Institute representative on the A.S.T.M. Committee on Lime and the Institute representative co-operating with the Bureau of Standards in the preparation of a standard specification for Glazing Glass. The reports of these representatives were transmitted to the Federal Specifications Board.

[1] In this department of the JOURNAL it is proposed to keep the profession informed as to the activities of the Institute in regard to research work, standardization and co-operation with technical bodies.

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STRUCTURAL SERVICE COMMITTEE

American Society Testing Materials—Committee on Slate

At a meeting of the producers and consumers of slate it was decided to organize an A.S.T.M. committee. The Institute was represented at this meeting by a member of the Scientific Research Department. The A.S.T.M. has had up to the present time no committee on the physical properties and uses of any building stones. It was thought that at some future time a committee should be organized to prepare standards for some other stone that there would be no difficulty in co-ordinating the work of the two committees.

Regarding the scope of the committee work it was decided that first attention should be given to developing the methods of testing and in the normal course of events this would be followed by working specifications. It was agreed that dimensional standardization could more properly be handled through the Division of Simplified Practice.

American Society of Testing Materials. Meeting of Committee C-1 on Cement. Professor Thomas Nolan, Institute Representative

The following subjects are being considered by the ten sub-committees of Committee C-1:

The specific gravity of cement, whether or not this property should be considered in standard specifications for portland cement.

Tests for neat cement, whether or not requirements for these tests should be reinserted in the standard specifications for portland cement.

Natural cement, a consideration of tests of these cements and of revised specifications for their use. A sub-committee was appointed to consider this material.

A proposed book of instructions. The subject of a small hand book was discussed, to contain general information and instructions regarding proper methods to be followed in making tests on cement in order to avoid faulty conditions encountered in laboratories making these tests. It has been found that there have been different interpretations, sometimes, of the methods of tests as outlined in the Standard Specifications for Cement. It has seemed desirable to some to enumerate the precautions to be observed in order to secure the best results, and also to refer to errors which might be introduced by deviation from standard methods. "A Manual of Testing Procedure" was considered as a title for this book.

Among other subjects considered were the following: Proposed changes in foreign specifications, research work being done in the field of chemical constituents of portland cement and the effect of admixtures; compression specifications; sounds and consistency of volume; normal consistency; strength; fineness.

American Engineering Standards Committee. Conference on Galvanizing

Representatives of the producers, manufacturers and consumers of galvanized products met, under the auspices of the A.E.S.C., to discuss the standardization of galvanizing and sheradizing. The Institute was represented at this preliminary conference by the Scientific Research Department. It was decided that nationally uniform specifications for various classes of galvanizing and sheradizing work were feasible and should be taken up under the procedure of the A.E.S.C. A committee of five was appointed to confer and make recommendations in regard to the proper body to assume chairmanship of the proposed committee. The scope of the work of the committee embraces a wide range of uses of galvanizing and sheradizing. Two subjects—sheets and plates, and pipe, tubes and conduits—are of special interest to the architects.

Annual Meeting of the American Society of Heating and Ventilating Engineers

The Institute was invited to attend the annual meeting of the A.S.H.&V.E., held in New York City, 22 to 25 January. During some of the discussions of research work of the Society, references were made to the recently organized Scientific Research Department of the American Institute of Architects and the Technical Secretary of this Department was invited by the President to address the Society and outline our organization and aims and correct any impression that the engineers might have that the architects had established a testing laboratory.

The meeting was largely devoted to technical papers, many dealing with subjects of direct interest and value to the architects. Among the papers of special interest to the architects were the following: Ventilation of Department Stores, Electric Heating, Status of Domestic Oil Heating, Air Leakage Through Openings in Buildings, and the Report on Proposed Code of Heating and Ventilating.

Division of Simplified Practice, U. S. Department of Commerce

With a view to eliminating waste in the slate industry a preliminary conference of all interested was called on 23 January to discuss the recommended sizes of roofing slate, blackboard slate, and structural slate. The Institute was represented by a member of the Scientific Research Department. In connection with roofing slate it was recognized that a great variety of blocks are obtained in quarrying and that the effort should be to set up a list which would utilize with the least waste as many as possible of the blocks. Furthermore, a basic color nomenclature should be adopted and also a clean-cut definition of the thickness of slates and a standard for measuring such thicknesses. Agendas setting forth customary practice in regard to blackboard slate and structural slate were presented for consideration. The discussion of the various recommendations seemed to indicate the advisability of further study and research. The National Slate Association, therefore, decided to revise the recommendations along the lines indicated by the discussion and resubmit them for consideration at another conference to be called.

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Marginalia Architectura

It was a beautiful spring morning in February, one of those rare days in the frozen north (reminiscent of Botticelli's "Primavera" or Pollajuolo's "Venus Verecunda") when "The touch of Zephyr and of Spring has loosen'd winter's thrall." We were surprised and delighted to meet our old friend, Bowser, honorary corresponding member of nobody knows how many architectural, archæological, antiquarian and allied societies (there is a string of letters after his name as long as the alphabet, which even includes an assortment of Chinese and Coptic characters, though he is perhaps best known for his researches and discoveries in the Pre-Incarial inscriptions at Caxamalca[1]).

"My dear fellow," he exclaimed, waving his long, graceful hands in a courtly gesture, "I have just come from a most charming *conférence* (for Bowser is as familiar with French phrases as any architect and rather proud of displaying his knowledge) at Providence, where the Rhode Island Chapter entertained their confreres from the other New England States within the hospitable portals of the Art Club. The occasion was pervaded with the aura of spiritual comfort and the genial warmth of companionship.

Unfortunately, however, I was unable to remain until the end of the interesting discussion which followed the dinner and the welcoming of the invited guests, a discussion that included such topics as "The Preservation of the Georgian Tradition" (ably and feelingly presented by Mr. Isham, who voiced the hope that, at least in New England, our suburban villages be not distorted and disfigured by the miasmic bottulinus of the bungalow, and that where inexpensive houses are built, the simpler forms of early Cape Cod outline, and back-country hill towns of the Connecticut Valley be followed), "Architectural Education," "The Duty of the Architect to co-operate with the School" (a procedure which might well be adopted, suggested by Mr. William Emerson, who objects to being called "Professor," and was thereafter addressed by the chair as "Bill"—his lucid suggestions were followed with keen interest), "The Obfuscations of the Competition Code" (remarks by Mr. Butler, who read a very able and clarifying letter from Mr. J. Lovell Little, which I hope will receive wide publicity, as it contains, in a few pungent paragraphs, the essence of high ideals and sound practice).

A thorough discussion on these topics should be of wide constructive value, not only to all architects but to those who may come in contact with them, both before and during the travail of building operations.

"The dinner at the Art Club that followed the welcoming process," continued Bowser—and here his resonant voice took on a more fruity tone—"recalls the *Carmina Burana* (attributed to Walter Map, though recent commentators are not so sure that Wright was right, and that the song was clearly written at Pavia between 1162 and 1165—vid. stanzas 9 and 24), where Golias declares

'With the cup the soul lights up,
Inspirations flicker;
Nectar lifts the soul on high,
With its heavenly ichor;'

"The clubhouse is picturesquely situated on the rise of one of the steep hills which engirdle Providence, the home of the bivalve, the *fons et origo* of the Rhode Island clambake; good old Colonial architecture and good old Colonial cooking—what could be sweeter? As you enter the Hall the stud is low, and all sorts of rooms and passages lead away in every direction and at different levels—some of it is Georgian, some of it is Eastlake, and some of it is President Hayes, but all is mellow and inviting, abounding in vistas of unexpected picturesqueness. The air is blue with smoke, vast steins and rows of *fiaschetti* suspended from the ceiling are seen dimly through the haze. Old prints, sketches and wall decorations are everywhere and the chairs and tables would delight the patina expert.

"In this mellow atmosphere we sat down to tomato soup, broiled English mutton chops with spaghetti, squash pie, doughnuts, cheese and coffee. A simple meal but one to be remembered. The soup was succulent and everything that tomato soup should be, rich in osmazôme. The chop, *parfaitment cuit au point,* full four fingers thick, was tender as a night in June, while the spaghetti which accompanied it was a combination of delicate flavors and savory essences which only the panurgy of a *gourmand* could evolve.

"The squash pie deserves a full paragraph. I did not see the completed structure, having only a portion brought to me on a plate, but it must have been a supreme work of genius like the Parthenon, the Temple at Edfou, of Salmanasar's palace at Khorsabad; in color a rich deep mahogany shot with baffling golden lights like great piles of amber and topaz. The crust—in the Late Perpendicular Style, was crisp and flaky—actually seemed to crumble from the mere menace of the fork. The noble squash had been manipulated by the genius of a master, and so imbued with savory, appetizing, palatable, delectable, luscious, ambrosial, and gustful aliments, as to produce what Brillat-Savarin[2] calls the three degrees of *le goût, la sensation directe, la sensation complète, et la sensation réfléchie.*

"There were great platters of doughnuts, smiling mounds of burnt cadmium, hot and fragrant. The cheese was soft and fresh, a perfect concomitant to the culinary *felicitas curiosa* of the New England housewife. It has not been definitely established that the doughnut was known to the Ionian Greeks, though the form of the rudimentary Ionic capitals would seem to indicate that such was the case. Certainly the doughnut is in outline the perfect torus and is fundamentally adaptive both to capital and base. The accidental placing of two of these forms on edge, like automobile tires, in combination with

[1] *The Ruined Monoliths of Tia-Huanacu*, by Beriah Bowser, M. A. Oxon, B.S.A., B.A.C., P.D., etc., etc. *In-folio*, 8 vols., ills., Lima, 1924. The Truxillo Pub. Co.

[2] *Physiologie du Gout, ou Meditations de Gastronomé Transcendante. Ouvrage théorique, historique et á l'ordre du jour. Par un Professeur, membre de plusieurs sociétés Savantes. Paris, Charpentier, Editeur,* 1838.

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one whose axis lies in the vertical plane (a juxtaposition that might readily occur to the inventive mind of the Greek youth in the Golden Age of Thales and Anaximander) at once presents the *partie* of the Ionic column, the most toothsome and delectable of architectural supports.

"A really good cup of coffee crowned this most satisfactory repast, which after all owed its success to the solicitude of our hosts, the members of the Rhode Island Chapter. As *The Professeur* (q. v.) says in his preface to *Physiologie du Gout, 'Convier quelqu'un, c'est se charger de son bonheur pendant tout le temps qu'il est sous notre toit.'*"

* * *

In connection with revivals the following "NOTE ON SIR JOHN SUCKLING" is not without its due mead of appoggiatura.

In MS. Ashmole, 826 et seq. there is a brief reference to the friendship existing between Suckling and Inigo Jones. It is known that on his (Suckling's) return from the Palatinate in 1832, where he had served with credit under Hamilton in his campaign in Lusatia and Silesia, this "readie sparkling witt" became famous at the Court of Charles I. "Literature and the fine arts obtained an unprecedented encouragement from the King; and these, directed by his own acknowledged taste, and that of the beautiful Henrietta Maria, rendered the Court of England the most polished in Europe."

Rare Ben Jonson and Inigo Jones, who designed many of the decorations for his masques, were looked upon by Suckling with deep admiration and frequently the younger man showed a lively interest in Jones' work. It is not absolutely certain that Suckling ever worked as a draughtsman in Jones' office, though the recent discovery of a hitherto unpublished fragment addressed to Will (Davanant?) (*Facetiæ; Musarum Deliciæ*, &c., 1817, III. 499) would seem to show a fine feeling for their foibles. Whether or not Suckling's unlucky affair with the lovely daughter of Sir Henry Willoughby had any bearing on the viewpoint expressed is neither here nor there; we present the verse, so far as known, for the first time:

Ye Olde Tyme Draughtfmennef Drynkinge Songe:

Draftfmenne with love haue nothynge toe doe
Af alle toe sonne they'll difcouver,
For drynke if the onlye miftresse that's trewe
So drynke withe the lippef of a loover.

Drynke cocktaylef inne alle the fcales,
Drynke youre beere in fulle fyfes,
Drynke sherrye ande egge, downe bye the kegge
Ande drynke untyl the sonne ryfes.

Whyfkie ftraighte if a drynke for a manne, whyfkie ftraighte is a drynke for a planne,
But sherrye ande egge, dronke downe bye the kegge, if a drynke for a fronte elevatyone.

H. G. R.

Letters to the Editor

Advertising

TO THE EDITOR OF THE JOURNAL:

Yesterday there came in the mail from one of our member companies a copy of the solicitation the Architectural Club of New Haven is making to manufacturers of building products, appliances, accessories, etc., for the sale of space in a catalog to be published in connection with its Fifth Annual Architectural Exhibition.

Accompanying the copy of the Architectural Club's communication was a letter from our member inquiring whether the Canon of Ethics of the American Institute of Architects in reference to solicitation for advertising in programs, catalogs, monographs, etc., applied to such a body as the Architectural Club.

To our member we replied that, although the Architectural Club of New Haven was not affiliated with the Institute, there are members of the Club who are also members of the Institute, and that we proposed writing some of these gentlemen suggesting they use their influence to have the Architectural Club refrain from conduct which the Institute has condemned as unethical when practiced by the individual architect.

It is, of course, not uncommonly the case that when we condemn in the individual we condone in the mass; and that men are very often helpless to prevent in the mass that which they abhor if practiced by the individual.

And yet, the Architectural Club cannot be so much of a mass that those members of the Institute who belong to it cannot take steps to have the Club conform to a code of ethics they themselves, individually, approve and follow.

ASSOCIATION OF NATIONAL ADVERTISERS, INC.,
J. SULLIVAN, *Secretary-Treasurer.*

A System of Architectural Ornament

The publication hitherto announced as a Portfolio of Drawings by Louis H. Sullivan will issue from the press about 10 March and will be entitled A System of Architectural Ornament. The price of the published edition will be Fifteen Dollars. The typography of the book is by Mr. Frederic W. Goudy, Institute Gold Medallist in Allied Arts, and the work will take high rank among American publications, both as an achievement in the literature of architecture as well as in the field of printing. There will be ten special numbered and hand-tooled copies bound in full leather at One Hundred Dollars each, and fifty copies in half leather at Fifty Dollars each. Both of these specially bound editions will be autographed by the author. A circular will be mailed on request.

Obituary

Henry Bacon

Elected to the Institute in 1902; to Fellowship in 1906
Died at New York City 16 February, 1924

Less than a year ago Henry Bacon stood in the center of the assembled pageant on the steps of the building he had himself designed as a memorial to the life and the works and the abiding spirit of Abraham Lincoln.

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It was one of the most beautiful events in the history of American architecture, and when from President Harding Henry Bacon received the highest honor which it is within the power of the American Institute of Architects to confer, his brothers in the practice of architecture thrilled deeply at the tribute; it is fair to say they were even more deeply thrilled than when Mr. Cortissoz, in his memorable address, spoke of Bacon as one who had "stated in enduring beauty the faith of a nation in an immortal leader." More beautiful because the beauty of it was then and there felt, for "heard songs are sweet, but those unheard are sweeter."

It seemed just that Henry Bacon should have lived long to wear his honors and to bask modestly, as was his wont, in the warmth of a great growing national appreciation of his work, but it was not to be. He entered the Post Graduate Hospital in New York on 10 February in the hope that he would come forth renewed in health, and so for some days it seemed. But on the morning of the 16th he passed away.

In the JOURNAL for June of last year, there appears an account of Henry Bacon's life and work. But as an evidence of the place which he had won in the public esteem, we reprint the editorial from the New York *Tribune* of 18 February:

When a great artist dies he takes from us the embodiment of an idea. He is the representative of a principle, a style, an individualized vision of beauty. Such a type was Henry Bacon. As a man he was modesty itself, gentle, generous, all sunny kindness to his friends. As an artist he stood for the severity of the Greeks and figured in his profession as the most consummate exemplar of the grand style we have ever had. This fact, which is confirmed by a large number of buildings designed by him, is made most triumphantly manifest in the Lincoln Memorial at Washington. Bacon's genius reached its culminating point in that famous temple. There he exposed in its noblest estate his idea, his style, his vision of beauty.

It is a fine thing when we can thus conceive of an artist's character, for it means recognition of something constructive, something durably fertilizing that he has brought into the world. Beauty is a living force. It does more than please the eye. It stimulates the brain, it warms the heart and brings the better self of mankind into action. The tribute that we pay to certain of the architects of America is a tribute of gratitude to men who left American art better than they found it. Richard M. Hunt did that when he brought here from Paris the motives of French classical design and used them with distinction in his own work. Henry H. Richardson was another significant contributor to our artistic experience through his exploitation of Romanesque. Charles F. McKim was in his turn a profoundly fruitful disseminator of the ideas of the Italian Renaissance and of the Roman principles underlying them. Henry Bacon, who, as a creative artist, was the peer of them all, dedicated himself to the majestic inspiration of the antique. With unique power he truly revived "the large utterance of the early gods."

He used it with much more than the authoritative skill of a craftsman mastering a technical instrument. It was for him the means whereby he instinctively expressed an inner spiritual purpose. Greek simplicity, Greek order, Greek beauty and grandeur were to him as the air he breathed. He dealt in these things with a fervor and a rectitude giving to his art a kind of moral weight. Art was with him, in fact, character in action. There was something enkindling about his devotion to the Lincoln Memorial. To those who knew him and observed him during the year of its erection nothing was more beautifully apparent than his absorption in what might be called the idealistic elements of his task. It was his privilege to commemorate Abraham Lincoln, and it was that, not merely the fulfillment of an architectural obligation, that engaged his very soul. Bacon was every inch a man, ardent upon political honesty, steadfast and invincibly square in all the relations of life, impeccable in the performance of duty, clean and sweet and strong, a friend whose death brings inexpressible sorrow to those who loved him. All these rich traits were poured as in a golden flood into the work that he did as an architect. The only comfort that we have in bidding him farewell is that he leaves behind him a shining and a deathless mark.

On 18 February the NEW YORK CHAPTER adopted the following resolution, prepared by Mr. C. Grant La Farge:

As we realize that the friendly voice of Henry Bacon is forever stilled, there come to us reflections of profound significance.

We recall first how that voice was never raised except in the ways of kindness, never expressed any other humor than that which has no sting. We think of the deep essential sweetness that radiated from the good man. And as affection moves us it is mingled with reverence at the thought of his pervasive modesty, the absence in him of any exploitation of himself, of his utter singleness of purpose and his sincerity.

True, devoted student of that great art of Greece that he so deeply loved, he came to know it as only the lover can know. Unfaltering in his fidelity, his long striving was not for what so many seek: bigness and loud acclaim and the driving bustle of the market place, but ever to capture and make to live again the exquisiteness of the most perfect moment of man's past. Let us all now be glad that the fine crown of his career was bestowed upon him by his own brethren, as they charged him with the task of serving his country by commemorating its great hero.

We may hold what views we like about the forms of our art; we can have but one as to the nobility of him who is gone away from us and of whom we shall with pride tell our sons. Grief is with us, and sympathy for the afflicted, but above the grief is thankfulness for what he was.

D. EVERETT WAID, *President.*
HOBART B. UPJOHN, *Secretary.*

Structural Service Department appears on the second right-hand page following

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL *jointly to give in this division, each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus accord architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

Air Leakage Through the Openings in Buildings—Weatherstrips (19e14)—(*Journal of the American Society of Heating and Ventilating Engineers—February—1924. By F. G. Houghten and C. C. Schrader*). Heat is lost from buildings *First,* by transmission and *Second* by infiltration, both of vital concern to the heating and ventilating engineer, architect and owner. Both are difficult of exact measurement and determination of constants which may be used in practice with the desired engineering accuracy. The calculation of heat loss from buildings probably involves greater element of chance than any other engineering problem.

The present investigation of the leakage of air through and around all types of windows and doors was made by the Research Laboratory of the American Society of Heating and Ventilating Engineers, in co-operation with the American Institute of Architects and the U. S. Bureau of Mines. The architect is interested in the relative leakage of air through various types of windows and doors, with and without weatherstripping, to design a building with the lowest heat loss consistent with other considerations. The heating engineer needs actual leakage through and around all types and sizes of windows and doors, or better, through a unit length of crack around such openings, to calculate more accurately heat loss from any room or building and supply radiation accordingly.

Air leakage through cracks around windows and doors, cracks in walls, and through the wall materials, occurs in accordance with two physical laws. *First,* interchange of air through wall by diffusion; *Second,* air current through wall caused by pressure difference set up by the impinging wind. The first goes on at all times, is independent of wind velocity, and is probably negligible. The second occurs only when there is pressure difference between the two sides of wall. Such pressure difference exists whenever the wind blows against surface of wall or whenever the direction of wind toward wall is changed. For any given velocity of wind striking wall at right angles, there is always definite pressure produced at surface tending to cause air leakage through cracks. Amount of air leakage for any crack for a given pressure difference is the same, whether pressure is produced by wind or other cause.

Data and Results. Results here given are for a double hung window, 2 ft. 8 in. x 5 ft. 2 in. x 1⅜ in. in 13 in. brick wall 10′-0″ high by 6′-6″ wide, plastered inside with cement plaster, built according to specifications supplied by and under the direction of S. F. Heckert, representing Structural Service Committee, American Institute of Architects. Every precaution was taken to make it represent

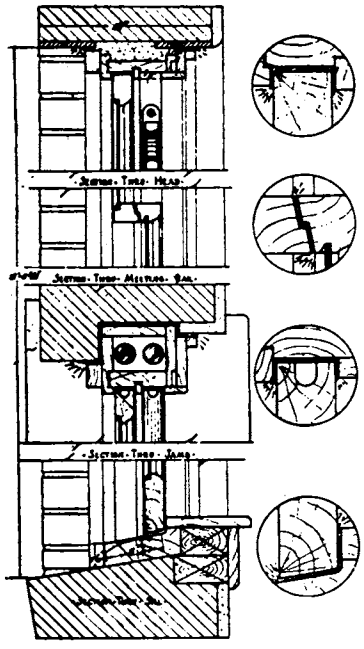


FIG. 3. DETAILS OF WINDOW WITHOUT WEATHERSTRIPPING

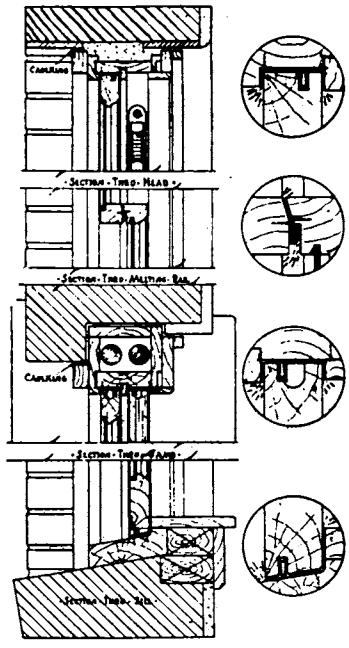


FIG. 4. DETAILS OF WINDOW WITH RIB TYPE WEATHERSTRIPPING

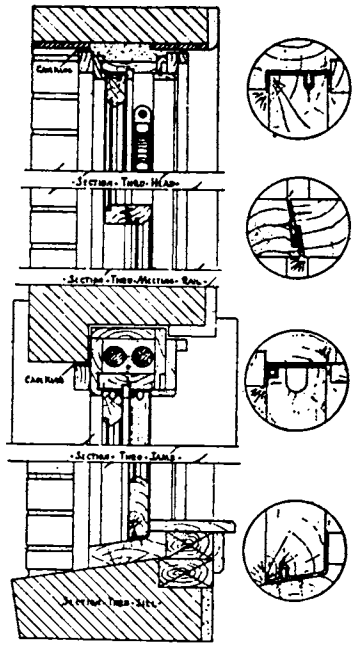
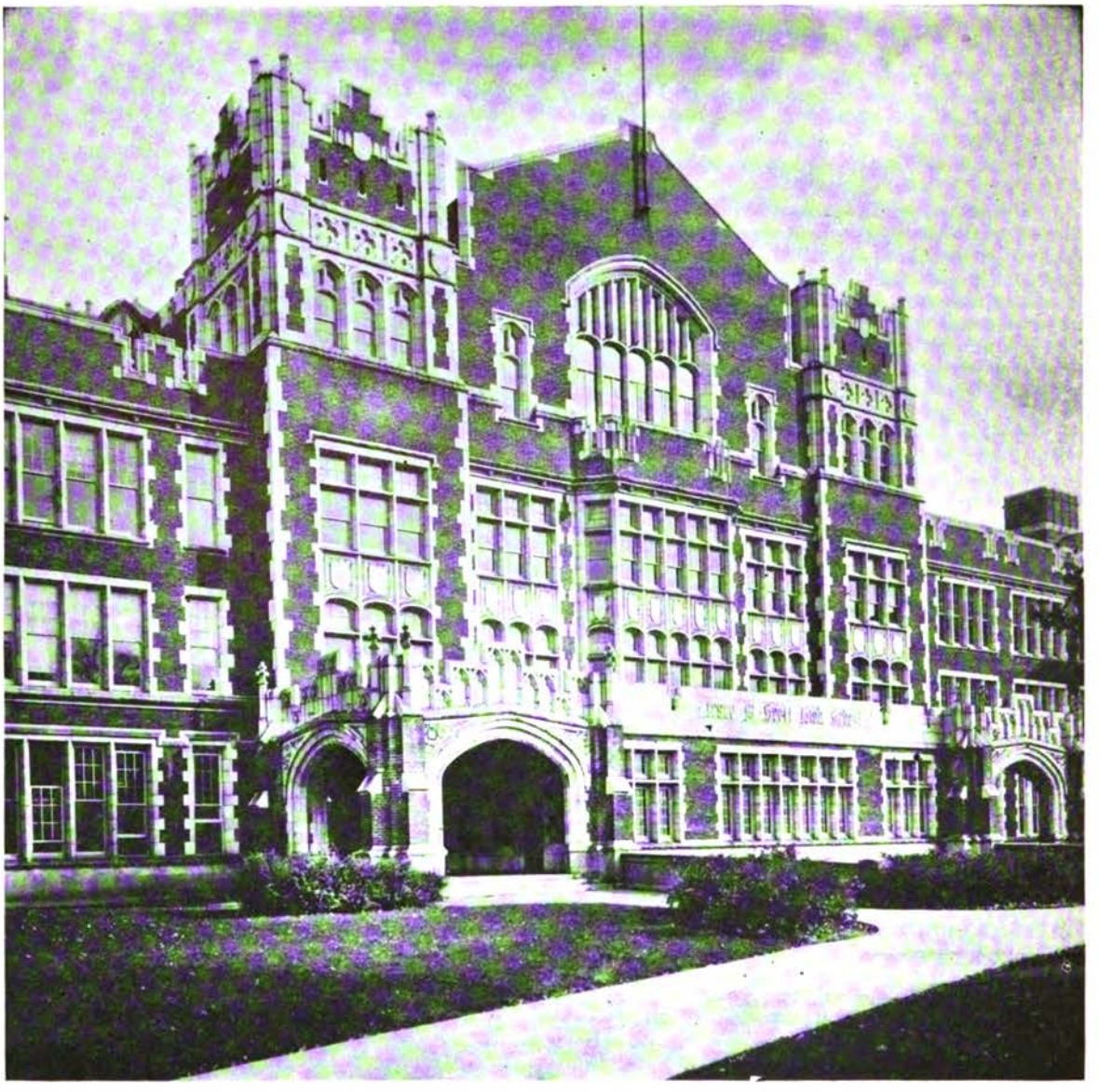


FIG. 5. DETAILS OF WINDOW WITH INTERLOCKING TYPE WEATHERSTRIPPING

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Detail of Central Feature, Jesup W. Scott High School, Toledo, Ohio; David L. Hine, Architect. The Morrison R. Waite High School, Toledo, is of identical design.

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SEGOVIA—UNDER THE AQUEDUCT

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A Little Tour in Spain

Segovia

Photographs by the Author

HAVELOCK ELLIS has written a vivid description of Segovia riding its hill like a great ship with sails set towards the west, the mediæval Alcazar at the prow, and the mighty Roman Aqueduct stretching far to stern. The Spaniard Zuloaga has painted his sturdy types against the panorama of its roofs and towers. But neither poet nor painter can exhaust its infinite and varied, its beguiling and romantic grace.

Impatiently we approached it, counting the miles and the minutes and searching the horizon for the first faint outlines of the harsh Guadarrama mountains which invest it. Those who laid the railway lines in Spain contributed to the enjoyment of the traveler in one respect. As a rule the towns and villages lie at a little distance from the railroad. Diligences or omnibuses, occasionally trams, connect them with the Estacion. This and the absence of forests or other obstructions in the bare landscape make it possible to see them whole as if at arm's length. Sometimes the station serves two towns, and both may be seen a mile or two away, their brown huddle of roofs and walls and little windows sharply outlined, with the bulk of the church and belfry rising above them. They do not straggle off into the country, but look in the clear air compact and complete as though lying quietly in the palm of a great bronzed hand. At times one may count a dozen near and far and many more than a dozen churches. But over great stretches not a roof, nor a chimney nor other sign of human habitation is visible. A long way off perhaps the tiny silhouette of a donkey bearing a bent and muffled figure may mark the thread of a road; and often these lonely and patient wayfarers are the only evidence that the land is inhabited. As the mountains loomed nearer our eagnerness increased, and then suddenly at a turn we caught sight of the ancient city cresting its long ridge, the Alcazar at the prow, and the slender spire of the Cathedral pointing upward like a mast. Another turn and we had lost it, but once or twice again we sighted it before we swung into a long curve around a spur which hid it completely from view. At the station we bundled into a bus and in a jiffy were rattling away over the dusty road which led under the high arches of the Aqueduct and up into the town. We turned sharp corners at what seemed a gallop and startled pedestrians pressed themselves flat against the walls to let us pass.

In the soft summer twilight the great Roman arches had an eerie height, and the narrow streets were filling with mysterious shadows. Behind blinds lamps began to flicker and in the dim courtyards shaggy donkeys were being relieved of their burdens. We felt apologetic for the racket of our coach in the mediæval stillness, and then lonely and a little resentful of the dark houses and withdrawing populace. But all at once we burst into an open square filled with lights and people. The effect was like the rising of the curtain in a darkened theatre. Round a little pavilion in the middle of the place, where a regimental band was straining its lungs, men and women and swarms of children buzzed; while back and forth, to and fro under the arcades of the Ayuntimiento young men and girls slowly sauntered taking the evening air. In a moment we had passed into the shadow of another narrow street, but could still hear the blare of the music as we jolted to a dead stop at the door of our inn.

Clocks have neither the dignity nor the tyrannical authority of Spain, to which we are accustomed. As Time is infinite, the ticking off of mere minutes seems not to be a matter of paramount importance. Climate, however, is a factor to be considered on the division of the day; and in a land where the sun makes midday

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SEGOVIA—THE AQUEDUCT

too uncomfortable for ardent endeavor the hours consumed by the meridional siesta may be retrieved after nightfall. Centuries of sunlight have tended to make the Spaniard appreciative of shadow. His umbrageous patios and leafy gardens, his dark interiors dimly lit by little windows, his cavernous and murky churches, are all designed to frustrate a too insistent sun. But, as the sun retreats into the purpling west, life flows forth into the streets refreshed. The dinner hour is yet a long way off, for he who dines at nine dines early. Therefore, our feet were drawn toward the bleating band in the Plaza Mayor, and for an hour or two we mingled with the animated throng. The children contributed the greater part of the animation. Their elders comported themselves with all the gravity of a proud race, and all the dignity which residence in a provincial town engenders. Even the cadets of the Artillery School, though they seemed very young, bore themselves with an air of achieved maturity, and a consciousness that destiny pressed upon them.

The great chevet of the Cathedral backs upon the square, and its soaring buttresses and pinnacles made patterns in the sky. But it was not until we could see it in the full light of day that we were to realize the whole force of its exuberant strength. In situation, Segovia may be compared to Toledo, although the hill upon which it lies with such majestic serenity is higher, apparently longer, and declines more abruptly into the valley at either side. Also its flanks are tufted with trees, and the country seems less forbidding and desolate. It is a natural fortress, the possibilities of which must have been early recognized. In Roman times it was counted a place of importance, and the Aqueduct, the largest and most impressive Roman work to be found in Spain, was built by Augustus. Its lofty arches of huge granite blocks, laid without mortar or clamps, link the city with the Fuenfria and bring the clear old water from the snow-covered heights of the Guadarramas ten miles away. There are one hundred and nineteen of these arches varying in height from twenty-three to ninety-four feet, according to the conformation of the ground. For a distance of about three hundred yards they are in two tiers. During a siege of the Moors, thirty-five arches were thrown down, but they were later rebuilt by Isabella the Catholic. For so bold and strictly utilitarian a structure the Aqueduct makes a tremendous effect seen from whatever point of view. Its arcades frame

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SEGOVIA—THE AQUEDUCT

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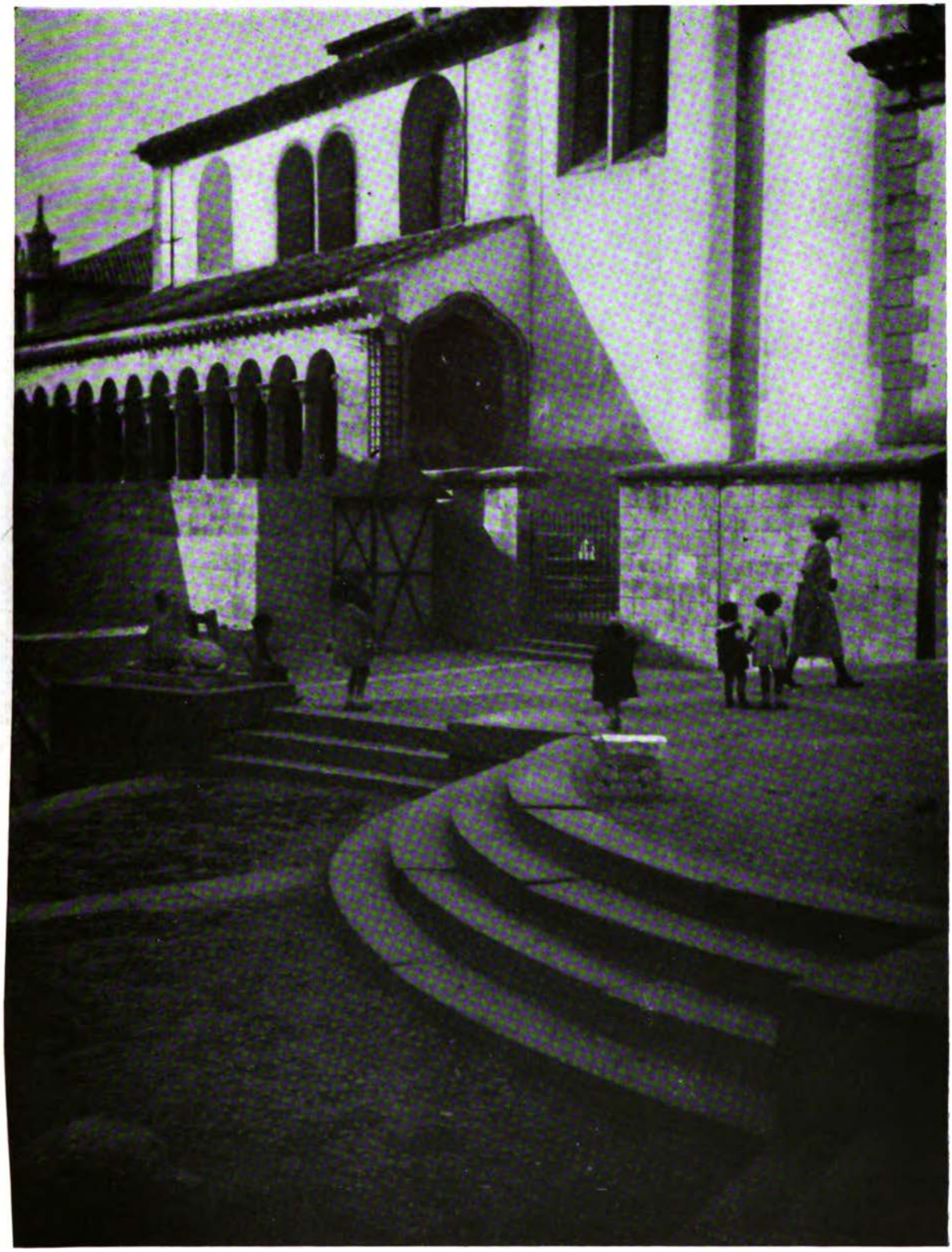
SEGOVIA—THE CATHEDRAL

delightful vistas over the housetops, with the mountains always in the background; and their rhythmic swing across the valley is as military and irresistible as the march of those Roman legions which once went clanking by.

There is much life and bustle still at times, in the Plaza del Azoquejo which lies under the highest arches, for the Plaza serves both as the market-place and as the chief entrance to the upper town. Bullock carts and donkeys from the country pass slowly across it; and from it set forth the diligences to Sepulveda and other towns hidden in the hills. El Puente, as the natives call it, figures not only in the seal of the city, but in every panoramic view. It is in fact a monument worthy to distinguish a city a hundred times greater and more important. Yet this ancient place wears other distinctions, and in addition to the Cathedral and the Alcazar, relics of two distant epochs in its glory, it is richly encrusted with Romanesque churches and Renaissance palaces, and girdled by walls of Roman and Moorish devising. Within these walls there is scarcely a structure of importance later than the sixteenth century, for then Segovia's role in the great drama of history had been played and the period of her greatness ended. Today she reposes untouched by the fever of competition, dreaming of her departed grandeur.

Lying on the borderland between two contending factions, the Moors in the South, with their northern base at Toledo, and the Christians in the North with their southern outpost at Burgos, Segovia fell sometimes under the sway of one faction and was sometimes the prize of the other. During the occupation of the Moors the Alcazar was built on the jutting promontory at the western end of the ridge above the point where the Eresma and the Clamores, after having flowed under opposite sides of its walls, mingle their waters. Here, later, Alfonso the Wise made his residence, and here from the parapets and barbizons, from turret and tower one looks down into the valley on either side and out across the rolling plains. Thread-like roads lead past towns of umber and lose them-

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SEGOVIA—SAN MARTIN

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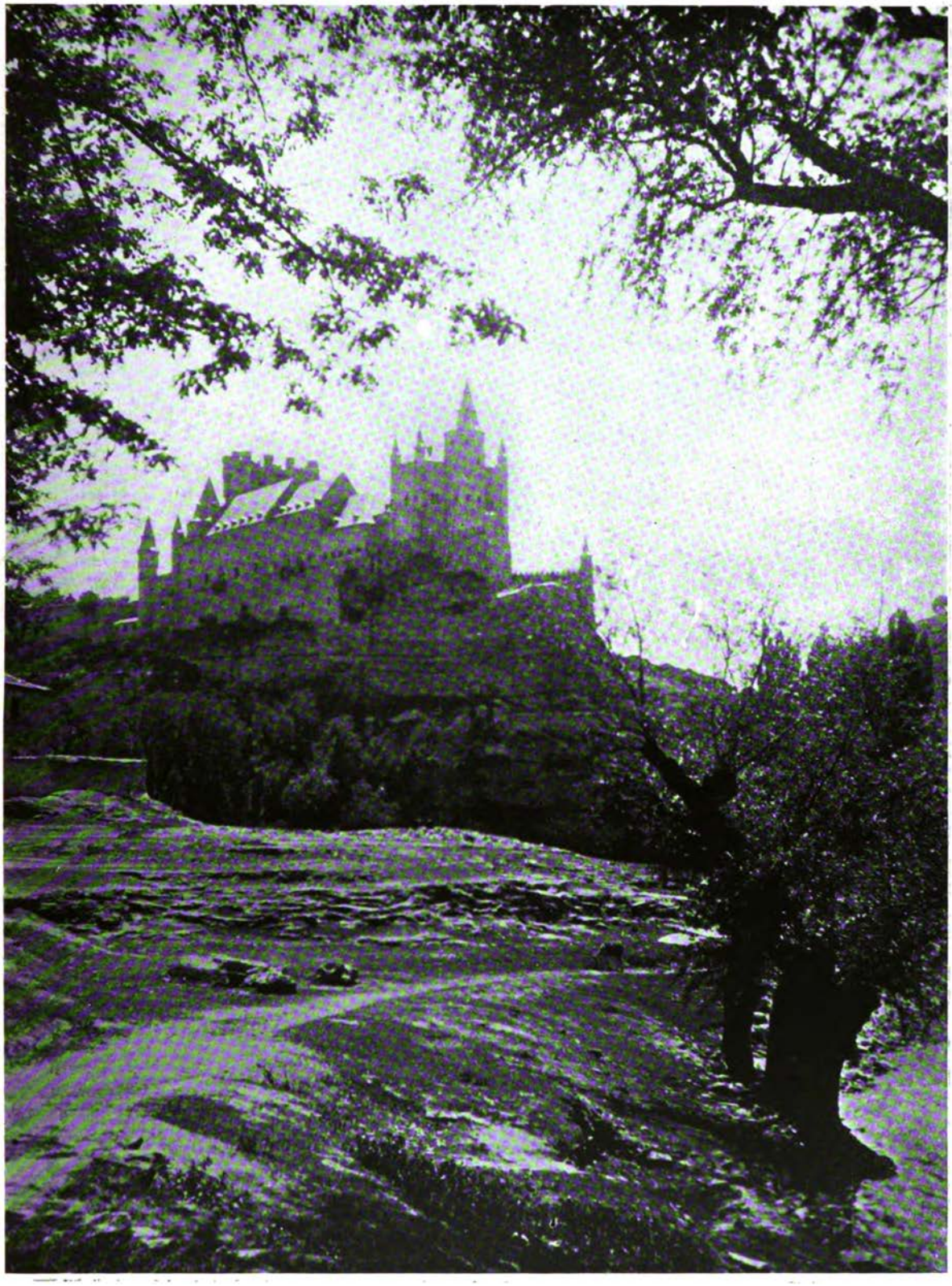
SEGOVIA—NEAR SAN MARTIN

selves in the distant haze of the hills. The centuries of Christian predominance from the eleventh through the thirteenth saw the rise of the Romanesque parish churches with their open arcades or external cloisters and their square many-tiered towers. And in the sixteenth, that culminating century for Spain as well as for Segovia, the great Cathedral was set upon the highest point of the hill like a diadem.

Thus seen from afar or as one wanders among its narrow streets and little sunny places, the drowsing town evokes echoes of a varied and valiant past that was Roman, then Moorish and finally Mediæval. The life that went on within its walls and the currents which eddied about them give it a charm and a character of which struggle and fierce endeavor are the essence. In its felicitous silhouettes and the happy adventitiousness of its clustered roofs there is no evidence of what we speak of so glibly as city planning. And, as we reflect on the vicissitudes of history and the urge of man's necessity, the credo of the city planner and that other slogan "preparedness" seem like shrill and futile whimpers in the great roll of destiny. At any rate, however planned, the effects which charm the sentimental traveler in this little city seem altogether spontaneous and fortuitous and have the naïveté of raw life itself. The three great features in its compositions were conceived in widely separated centuries, each to fulfil a vital need. The Aqueduct had no other than an intensely practical purpose, necessary to the sustenance of life itself. The fortress palace was the kingly residence and citadel around which that life clung and flourished. The Cathedral was the upward leap of the spirit toward the King whose power would never wane.

The Cathedral is the last of the great Gothic churches and built in the early dawn of the Renaissance on ground where the round arch and straight curt forms of the Romanesque were deeply rooted, it has a strange hybrid but altogether harmonious flavor. Juan Gil de Ontañón, its architect, had already built the new Cathedral at Salamanca, and here he seized the opportunity to refine and perfect his early design. Some fifty years were passed in its building, and Juan's son Rodrigo assisted in its completion. The splendid Gothic cloisters were built by Juan Campero of stone carried from the old cloisters on their site near the

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SEGOVIA—THE ALCAZAR

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SEGOVIA—HOUSE OF JUAN BRAVA

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SEGOVIA—CLOISTERS OF SAN MARTIN AND MOORISH TOWER

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SEGOVIA—MOORISH GATE AND OLD WALLS

Alcazar, by the faithful Segovians. I have spoken of the great apse, polygonal and buttressed, with its crocketted pinnacles and tracery windows. This is the most Gothic portion of the building as to detail, though the principles throughout are Gothic, albeit the crossing is crowned with a round cimborio topped by a dome very Renaissance in feeling. The noble tower set at the south angle of the bare west front rises sheer from the ground in straight, soaring lines to be capped again by a lovely Renaissance belfry. Not only are the silhouettes of the Cathedral delightful and infinitely varied, but the color of the stone, golden brown full of yellow sunlight, is as warm and happy as an old monk's face. The general air of felicity is, however, restrained, sedate and decorous. Vigorous outline and spareness of ornament combine to create an effect of sober dignity and mild austerity.

Too many are the riches of Segovia to be catalogued even briefly. They are like the heirlooms of a noble but reduced house. Though time has tarnished them they are for the most part intact, despite long centuries of disuse. They are tenderly respected and even the children flush proudly as they point the way to the stony old house of Juan Brava the Communero, and follow one around the church of San Martin with its fine portal and open Romanesque arcade facing on the small Plaza. These little places, of which there are several, are neither squares nor circles, nor even triangles, but rather sunny pockets into which the narrow streets flow, pause for a moment and then meander on. Every turn discloses some alluring picture. Through an archway there is a glimpse of some half-ruinous courtyard with sagging beams upheld by stout timbers which struggle to remain erect under their burden. A granite portal or an heraldic escutcheon refuses to be enveloped by the stucco which has overlaid the surrounding walls. Sometimes a Moorish fragment is visible, and often there are Moorish reminiscences in the latter plaster work scratched in geometrical patterns over an entire facade. A fine Reja or even the bare front of a palace, gaunt but undaunted, defies the slow erosion of time. The Gothic church of San Miguel seems, excepting the Cathedral, to be almost the only religious structure erected since the thirteenth century. It was finished in 1558. The Romanesque churches are nearly all distinguished, like San

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SEGOVIA—NEAR SAN LORENZO

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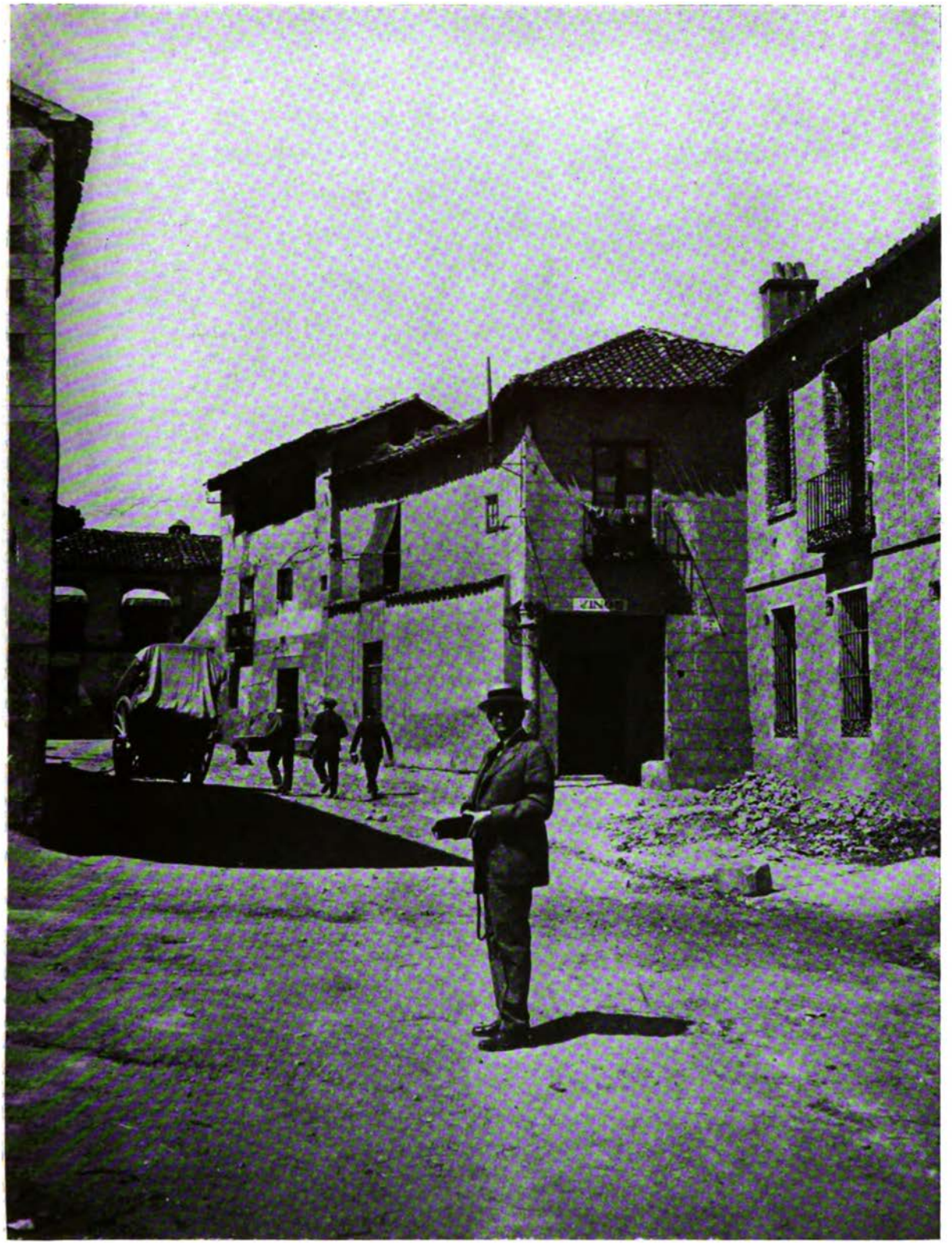
SEGOVIA—OLD PALACE

Martin, by cloister-like corridors running along the exterior walls. Street thought these designed to insulate the interior against the heat. This feature[1] may also be seen in San Vicente at Avila but nowhere was it so consistently used as in Segovia. Besides San Martin there are a host of others—San Esteban, San Juan, San Millan, San Clement and San Andre.

The town is so closely crowded on its hill that a few moments' walk will bring one to the brink to look out over the roofs that lie below and the trailing suburbs in the valley. And indeed as the town was designed to command the country, so from the country may one best envisage the town. No walk could have been more lovely than ours one morning as we descended by long winding ramps and steps to the Plaza del Azoquejo and set out under the high arches of the Aqueduct along the way to San Lorenzo. Turning we looked back upon El Puente striding across the valley; and as we drew away from the town its towers began to appear above the soft brown roofs. The peasants who passed us nodded gravely. Sometimes they walked beside their panniered donkeys, sometimes they sat sideways or half facing behind; and some were astride far back in the rump and their long legs seemed just to miss the ground. The air was clear and sparkling and far off the mountains looked blue, exactly like the Valasquez backgrounds in the Prado. Life went on as leisurely in San Lorenzo as along the highway. Workmen in the shade of their own doorways plied their trades. Housewives carried water from the well, or baskets and babies in their arms as they slowly crossed the small plaza, where the round apses of the church cast fat cool shadows. Turning back we skirted the hillside, passing the deserted church of Santa Cruz. Crossing the Eresma we entered the shaded avenue of the Alameda which we possessed in solitude. Beside us the tiny river flowed without hurry, and from its opposite margin trees and verdure clambered up the steep hillside. The yellow and crumbling walls of El Parral, once a centre of learning but long since deserted, rose at our right. From the wide terrace of the Alcazar we had looked across into its cloisters but the old woman who guarded its emptiness could show us nothing but a faded retablo,

[1] Richardson may have recalled these churches in the open gallery of Trinity in Boston, though here he used the cloister-like arcade as a link between two detached buildings.

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SEGOVIA—OLD HOUSES

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SEGOVIA—THE AQUEDUCT

a few tombs and some broken arches. In the Paseo on the hillside, under the ramparts of the Alcazar, peacocks screamed and spread their wings. Further on standing quite aloof in the rocky plain is the little twelve-side church of Vera Cruz erected by the Templars in 1208. It was closed and bolted and we could do no more than circle round it and stare at its sturdy tower and its three apses.

A little way down the stream under the Pena Grajero, a cliff from which criminals were thrown, we came upon the Sanctuary of the Virgin of Fuencisla, built in honor of her miraculous intervention in behalf of Maria del Salto, a beautiful young Jewess, who when accused of adultery and thrown from the cliff called upon the Virgin for aid and alighted unscathed. Outside the Puerta de Valladolid we recrossed the Eresma turning the angle of the cliff to follow the Clamores where sheep grazed under the high sloping walls. The mast of the Cathedral rose before us and then, across the ravine, all its great bulk in constantly shifting perspective. This was the side from which we had first caught sight of the city and now again its whole outline appeared complete and perfect.

Small enough to be taken to the heart, Segovia is infinite in interest. Its venerable sweetness, its locked churches, its quiet by-ways in which the little donkey hoofs striking the flinty cobbles make sounds so faint that they seem to come from far off centuries, induce a gentle ecstasy. The great Zuloaga comes back after his triumphs in Paris to wander its streets by moonlight and to paint the three pretty daughters of his uncle Daniel. Uncle Daniel long ago established his studio and kilns in the old thirteenth century church of San Juan de los Caballeros, which stands on a flat shelf overlooking the valley to the north. Here the old ceramist painted his tiles and panels of faience, drawing his inspiration from El Puente, the Cathedral and their bare background of hills. Here in the old chapels he set up his furnaces to bake the clay, and in the dim nave he received the chance traveler with a fine Spanish courtesy. He looked with his flowing beard and keen eyes quite as the famous picture in Boston shows him, with his beloved Segovia in the distance. His three daughters—Esperanza, Candida and Theodora—still carry on his work. No more romantic studio can be imagined nor any dwell-

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SEGOVIA—OLD HOUSES

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SEGOVIA—THE ALCAZAR

ing place more strange and charming. The blocked-up arcade is made to serve as a long gallery hung with cartoons and sketches, placques and azulejos which picture the city. In the lofts and the square tower are living quarters with the simple strong furniture fashionable when Philip the Second was King. San Juan is almost the only one of the old mediæval churches to be quickened by use, and though the haze from its ovens has no longer the fragrance of incense San Juan is still a temple where solemn rites take place.

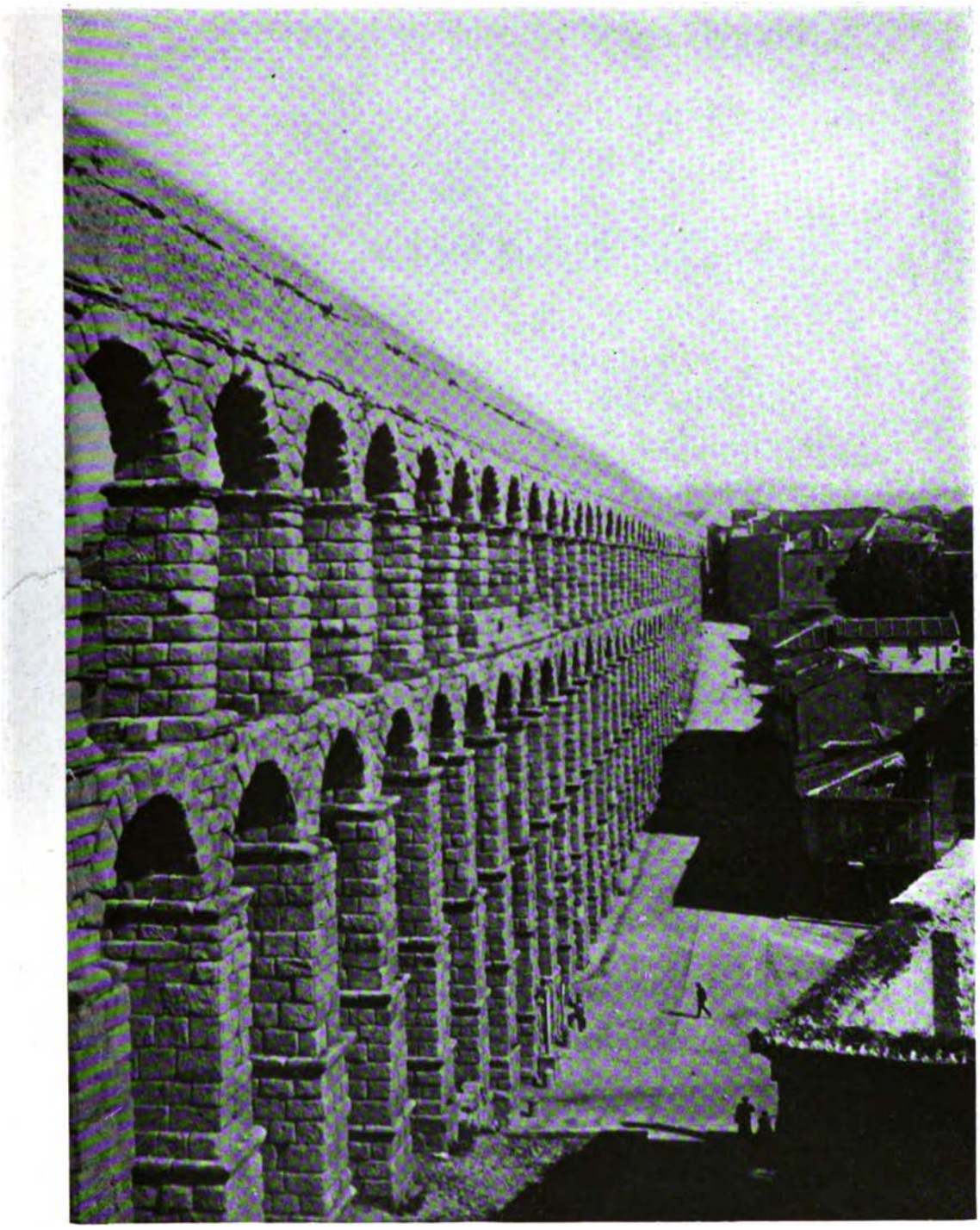
Most of the others, locked and barricaded, are mute witnesses to a once teeming life. Some have long ago been abandoned to the slow processes of decay, and the fine carving of their portals and capitals is being gradually erased. Only the splendid tower of San Esteban has been restored and proclaims itself an object of solicitude by the network of scaffolding which surrounds it.

What clashes of passion, what great emotions, what hungry industrial efforts will stir the sleeping city to awake once more? Slowly she seems to sink into an ever deeper slumber; and the peasants from the hills with their cavalcades of mules seem to come and go almost on tiptoe.

Reluctantly we turned away as the light was failing. The lengthening shadows spread over the ancient place a rare enchantment. And the towers and tiles, the domes and arches of Segovia gently vanished into the night.

LOUIS LA BEAUME.

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SEGOVIA—THE AQUEDUCT

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MONTICELLO—THE EAST PORTICO

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MONTICELLO—THE EAST FRONT

Monticello

Photographs by Roger Millen

MONTICELLO, the home of Jefferson, is set on a mountain top. To us, heirs of the romanticism of which he was the American pioneer, there is nothing strange in this, but in his day it was wholly new, even in Europe. From his boyhood home in the watered valley, his spirit yearned toward the heights, with that profound reverence for nature to which he once gave expression at a prospect in the Alpes Maritimes: "Fall down and worship . . . you never saw, nor will ever see such another." From Monticello itself there unrolls on the west a mountain panorama of the Blue Ridge scarcely less magnificent, while to the east stretches the endless plain, his "sea view," as he called it.

Here, when scarce out of college, he dreamed of creating, in what was then still wilderness, natural gardens with cascades, enriched by temples Greek and Gothic—the first American landscape garden. Like the young Goethe, whose youthful panegyric on the cathedral of Strassburg was then soon to appear, Jefferson began as a thorough romantic.

Like Goethe too, however—in this as in so many other respects—Jefferson soon turned to the classic. In his own final judgment, witnessed by his epitaph, he appears above all as a lover of freedom, whether in politics, in religion, or in science; but the freedom thus loved from youth was essentially the freedom of reason to reach its logical conclusions, not freedom to degenerate into formless anarchy. Trained in the law, he demanded logical sys-

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MONTICELLO—THE WEST FRONT

tem in thought. He insisted, too, on going to the sources in every field: in his fundamental study of the common law, in his researches among fossils, in his Biblical criticism. Thus he was led back to the earliest precedents, among the Anglo-Saxons, the Greeks, the Romans.

Thus is explained the paradox that Jefferson, the apostle of individualism, should have chosen as his first master in architecture, Palladio, who passes as the chief representative of dogmatic authority. The reconciliation lies first in the character of reasoned law borne by Palladio's architectural system. However artificial it may seem to us, it had in common with nature this supposed lawfulness and reasonableness, which was doubtless what Palladio himself felt when he wrote: "Architecture, the imitator of Nature." Here was the relation to natural law, one of Jefferson's fundamental conceptions. With the weight of primitive and classic precedent which Palladio sought to adduce and Jefferson was quick to respect, the preponderance of spiritual agreement between them was overwhelming.

Teaching himself to draw—like Washington and like his own father, Peter Jefferson, a surveyor of land—he modelled his designs on the plates of Palladio's work and mastered the grammar of architectural detail with a new insistence on classic correctness. Hundreds of sketches and drawings by his own hand, based on his marginal calculations, are still preserved. The designs for Monticello were essentially fixed, and the first building, Jefferson's study, was already occupied, in 1771, before he sent an appeal to his business correspondent in the Tidewater to get him an architect to supervise the construction. Even then none came. There were none to be had. In all the colonies there was not then a single architect in our professional sense. Hallet and Latrobe, men of fine foreign training, did not emigrate to America until the last decade of the century. Thornton and Bulfinch, at first gentlemen-amateurs, though now revered as fathers of the profession, did not begin their architectural careers until 1789. Robert Mills, to whom the design of Monticello has sometimes been ascribed, was still unborn. The drawings of the colonial master-builders, still preserved, are childish beside Jefferson's. Only old Peter Harrison at Newport, himself always an amateur, and Hawks, Governor Tryon's man, had made

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MONTICELLO—THE SOUTH LOGGIA

such drawings here before him. At that time, we learn, there were not two stonemasons in the whole county of Albemarle. Jefferson had to train his own workmen, and created a body of them that spread his ideas in the magnificent houses all up and down the South.

The house which Jefferson built at Monticello for his young bride was something then new in America. It was not merely an unadorned pile like the old buildings at Harvard College or at William and Mary, of which Jefferson wrote, "but that they have roofs, would be taken for brick kilns." Nor was it adorned with a "burden of barbarous ornaments," as Jefferson called the scroll pediments and other baroque features of the colonial houses of the James River and Annapolis. "To give these symmetry and taste," he wrote, "would not increase their cost. It would only change the arrangement of the materials, the form and combination of the members." Thus Jefferson taught the great truth that the supreme merit in architecture lies in geometrical simplicity and proportion. From this point of view, we can understand the enthusiasm of foreign travelers like the Duc de la Rochefoucauld-Liancourt, who said Jefferson was the first American to consult the arts on how to shelter himself from the weather.

As we see it today, Monticello is not as Jefferson first designed it and the Marquis of Chastellux saw it just after the Revolution. Then it was thinner and higher, with a great library in the centre upstairs, attics over the wings, and a second portico over the first, like the Venetian villas of Palladio along the Brenta. Liancourt saw its reconstruction begun in 1796, and wrote: "Monticello, according to its first plan, was infinitely superior to all other houses in America, in point of taste and convenience; but at that time Mr. Jefferson had studied taste and the fine arts in books only. His travels in Europe have supplied him with models; he has appropriated them to his design; and his new plan . . . will be accomplished . . . and then his house will certainly deserve to be ranked with the most pleasant houses of England and France." At Nîmes, as he wrote the Comtesse de Tessé, he had gazed "whole hours at the Maison Quarrée, like a lover at his mistress"; in Paris he was "violently smitten with the Hotel de Salm, and used to go to the Tuileries almost daily to look at it"; in South-

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MONTICELLO—CHIMNEY PIECE IN THE MAIN HALL

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MONTICELLO—CHIMNEY PIECE IN THE DINING ROOM
With Jefferson's Candelabra and Wedgwood Medallions brought from England.

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MONTICELLO—THE WESTERN LAWN

ern France he was "immersed in antiquities from morning to night." It was to make his house more truly Roman that he removed the upper story and attic, and built instead, on the lines of the Hotel de Salm, the Roman dome which we see.

This was the Jefferson to whom we owe the superbly classic form of the early buildings of the Republic: The Virginia Capitol, for which he himself made the drawings and had the model made in Paris; the competition of the public buildings in Washington, the first great public competition among architects in America, of which, as Secretary of State, he wrote the program, and in which he himself submitted a design; the encouragement, when he was President, of the first trained architects from abroad, to establish, amid inconceivable difficulties, the profession and the art of architecture. This was the man who sent Houdon to Virginia to make the portrait of Washington, who brought sculptors from Italy, who imported carvings from Carrara. He deserves to be known, not only as author of the Declaration of Independence, but as the father of the arts in America.

Jefferson, the architect and patron of art, was far ahead of his time. To Philistines of the day any dabbling in the arts was beneath the attention of a public man, and at best they looked on his activity with good-natured tolerance. At worst, partisanship invented absurd canards like those of Callendar. When Jefferson took his stairway out of the entrance hall, and gave the stairs privacy in a house overrun with unbidden guests, it said the "philosopher" had forgotten the stairs. When he placed the kitchens in a basement, below a terrace from which one enjoyed the superb panorama, people said the corridor below was an underground passage built to escape from the British.

It can easily be understood that Monticello as it stands today should be a trifle disappointing. When a swarm of guests and their horses were eating Jefferson into bankruptcy in his later years, rooms had to be improvised in the cornices, the roof had to be raised and filled with garret dormers. The house was under almost constant reconstruction. Jefferson took it cheerfully, saying to a visitor: "So I hope it will remain during my life, as architecture is my delight, and putting up, and pulling down one of my favorite amusements." Then, in the

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MONTICELLO—THE KITCHENS UNDER THE SOUTH TERRACE

long period of neglect and litigation in the middle of the last century, much disappeared, and the beautiful furniture brought from Paris was largely dispersed. In recent years decay has set in in some places: one can no longer walk the terraces; some of the magnificent trees are yielding to old age. There are a few incongruous additions.

But the main fabric stands unharmed, and at every point we have Jefferson's own drawings and notes, so that all could be put back in beauty precisely as it was. Every tree and bush he planted is located and marked. The place waits only to be reclaimed by the nation and restored with loving hands.

In Spring, when the Virginia woods are ablaze with the flowering shrubs and trees Jefferson loved, when the hills are golden with the broom he first planted, when the air is heavy with the scent of locust, then at Monticello we can even now recapture the magic of Jefferson's artistry. We fall under the spell of this great man, the very founder of American democracy, and worship at his grave and at his shrine, a shrine of the whole nation.

FISKE KIMBALL.

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A Reconstruction of the Basilica of Constantine in the Roman Forum

Part II

The Reconstruction of the Interior

As we have said in the previous paper,* the main entrance to the basilica was at the east by a single door in the center of the narthex. There was a secondary entrance at either end of the narthex. The ancient street pavement, as it passes across the axis of the east front of the building, is two feet above the floor level of the narthex, so that it was necessary to descend three steps on entering the building from this door. Three entrances led directly from the narthex to the nave and one to each of the side aisles: the central entrance is a foot wider than the others. Traces of cramps and of bedding for marble veneer have led us to sheath the narthex with this material up to the spring of the vaults with a marble base to a height of about two feet above the floor.

Wall Decoration

In the main hall the marble veneer ranged from the floor to the top of the main cornice, a fact to which the remains of cramps testify. The marble of the walls was probably arranged in geometrical patterns, with contrasting effects of the darker and lighter varieties.[37] The actual remains show that above the spring of all the arches stucco in slight relief was used as decorations.[38] A border of tendrils, in a pattern similar to that of the marble friezes of the fourth century temple at Spoleto and the shrine of the Clitumnus of the same period outlined, in some cases, the arches of doors and windows, as for example, over the door at the north end of the narthex. There are traces of yellow on the stucco still in place. Possibly the yellow garlands were thrown into relief against a colored ground with an effect similar to that of the fifth century mosaics. The room of the narthex consisted of seven small groined vaults. The ceiling was covered with oblong panels in stucco of which eight remain in the northeast corner. The panels enclose garlands and must have been colored as were those over the arches.

Pavement of Narthex

There was enough of the pavement of the narthex left a century ago to give the pattern. (See Fig. A, Part I.) It consisted of a double row of squares, separated by bands and alternately enclosing squares and circles. Angelini and Fea represent nineteen squares in each row in their plan. Nibby mentions giallo and cipollino as among the varieties used, and he states that the slabs are thin and poor in proportion to the height of the building. White Carrara, doubtless, was employed for contrast.

Stairway in Pier Between Narthex and Aisles

In the north pier, between narthex and main hall, a small door led to a circular staircase which reached the roof of the narthex. From this roof, further to the left, a second staircase in the wall continued to the roof of the aisle. All the buttresses contained straight staircases which led to the roof of the clerestory.

* This (Part I) appeared in the Journal for February, 1924.

[37] Collection Destailleur. Kunstgewerbe Berlin 4151 No. 6 shows decoration in marble from S. Adriano.

[38] Ibid. No. 4151 No. 11 Desgodetz pgs. 105-109 shows more stucco than is now in place.

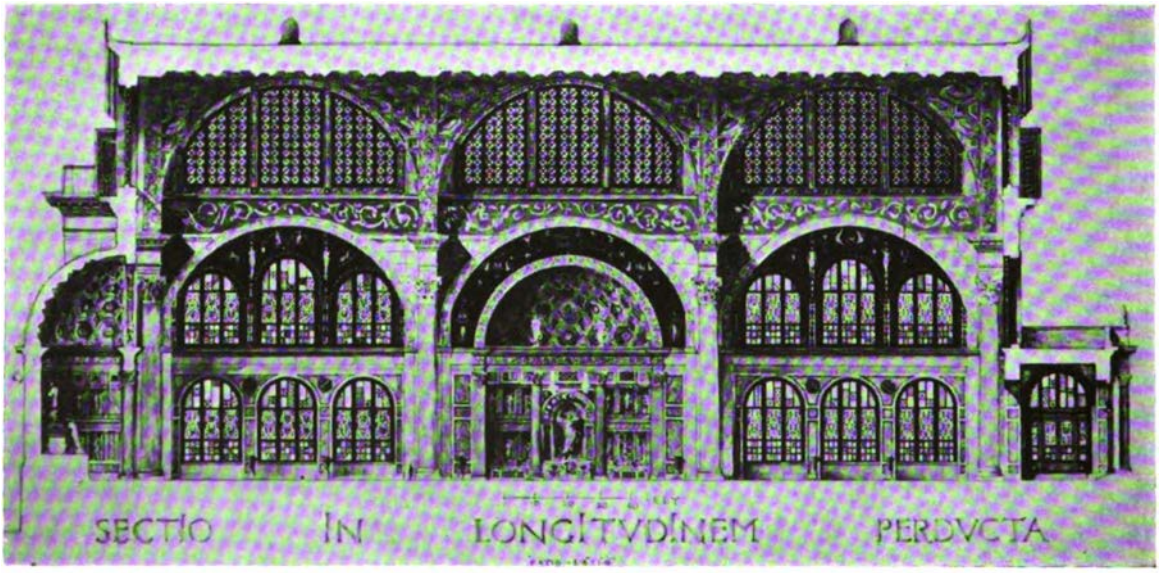


Plate II. Longitudinal. Section 2. V. L. S. Hafner

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FIGURE 5.—COLUMNS FROM THE BASILICA OF SANTA MARIA MAGGIORE

LATER CHANGES

The upper portion of this stairway is still accessible from the level of the adjoining garden. The lower part was destroyed at some time and a place of deposit formed in its stead. Possibly to the same period as the destruction of the circular stairs is to be referred the addition of the small apse within the arch of the north doorway of the narthex and the walls which block off that end. The walls of this small apse would point to a date after the sack of the city by the Vandals in 455, when small tufa blocks were used as facing.[39] The blocking-up of the first and second windows at the north of the narthex is also late. The opening under the second narthex window from the north has been described as a stairway.[40] An examination of the recess shows that it did not extend high enough to have enclosed a stair. A segmental arch in the original wall facing, two and a half feet from the ground at the ends, spans the opening, the sides of which are formed by two parallel faced walls running through the thickness of the pier and continuing beyond the rear wall of the recess. The wall at the back is of course rubble and unfaced. It appears that these walls and the arch which spans them were constructed to lighten the

[39] Rivoira, Architectura Romana, p. 177.
[40] By Nibby, who also incorrectly restores circular staircases in the south piers.



FIGURE 6.—MEASURING BASE OF COLUMN

pressure at this point. Probably the recess thus formed was filled in with non-bearing walls which were picked out at a period when the basilica was no longer intact. Perhaps a drain passes under the wall at this point, a branch of that which runs parallel to the short axis of the basilica at the left of the center.[41]

INTERIOR OF HALL

The narthex led into the nave and the side aisles. The latter were divided into three bays by massive brick piers nearly eleven feet thick. These, together with the unusually thick walls of the ends of the building, carried the three groined vaults which formed the clerestory, and also supported the barrel vaults which roofed the aisles: the groined vaults were, however, partly supported by the eight monolithic columns which stood in the nave, in the corners and in front of all four piers.

Our measurements of the column were made from the single extant shaft now standing in the Piazza of Santa Maria Maggiore.[42] (Figure 5.)

[41] Lanciani, R & E p. 303.
[42] Removed from the basilica by Paul V in 1613.

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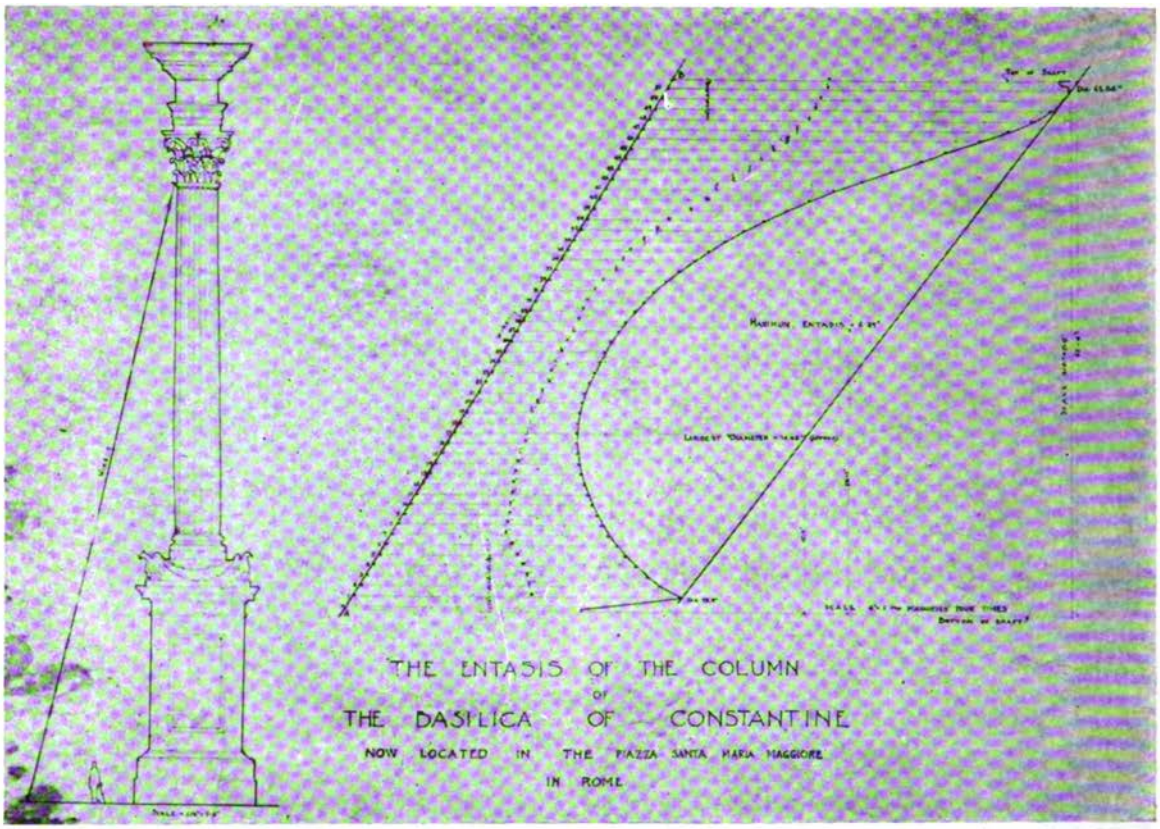


FIGURE 7.—DIAGRAM SHOWING ENTASIS OF COLUMN, DRAWN BY G. P. STEVENS AND V. L. S. HAFNER

Another small fragment is lying in the southwest bay. The column is a monolith of Proconnesian marble.[43] It has twenty-four flutes. The height of the shaft is fifty-two feet; the capital measured seven feet nine inches; the base, three and one-half feet. The capital which

[43] Porter, What Rome was built with, p. 87 for description.



PLATE III.—CROSS SECTION, HAFNER (FULL PAGE)

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FIGURE 8.—PHOTOGRAPH OF INTERIOR

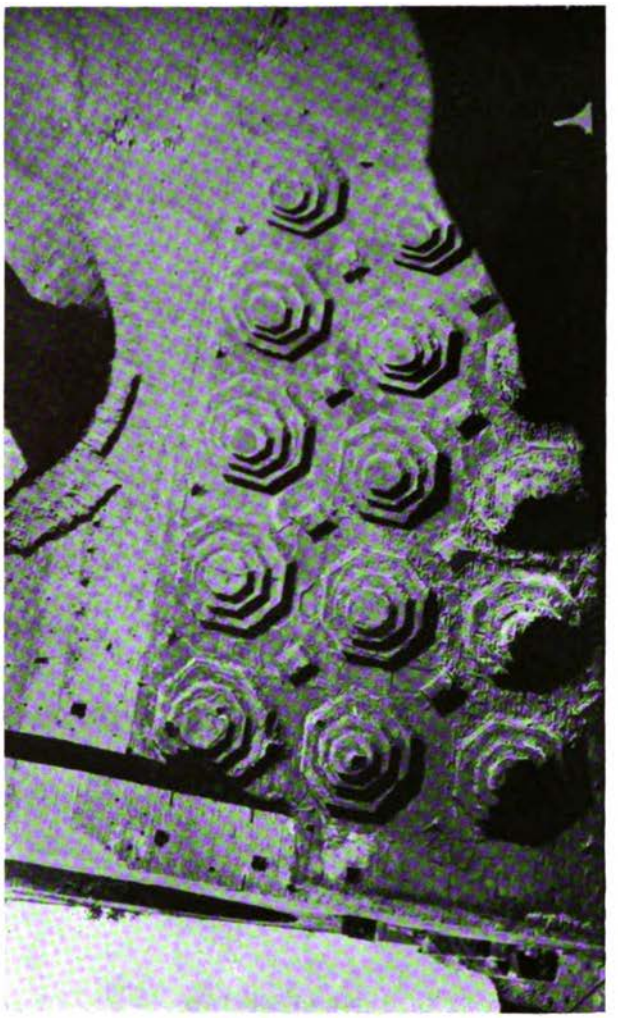


FIGURE 9.—SECTION OF BARREL VAULT

now supports the statue of the Virgin is not the original, than which it is somewhat lower. We have drawings of the fourth century capital, made before the removal of the column from the basilica.[44] Part of the marble architrave still embedded in the wall of the central hall gives the measurements of this element. The entasis of the shaft was described as "fortissima" by Nibby. We made measurements of the entasis of the column under the supervision of Professor Stevens, Director of the American Academy in Rome. The method employed was as follows: The upper and lower diameter were obtained by specially constructed callipers, as shown in the photograph (Figure 6) which were set at the column and then taken to the ground and the distance between the arms measured. These measurements were checked with those of the circumference of the column measured with the tape. The bottom diameter is 72.9 inches; that at the top 65.88 inches. The shaft from the base to the necking was then marked off on an arris at intervals of a foot. A spike was driven between the shaft and necking of the capital, and from this a wire was stretched to a point on the street level and strained as much as possible. This wire formed a line of reference from which horizontal measurements could be made. The horizontal distance from the point marked on the arris to the wire was measured in each case. Thus it will be seen that the shaft and the wire may be drawn out at a convenient scale, and the entasis itself plotted by means of the horizontal offsets from the wire. The maximum entasis of 2.39″ occurs at a height of 28 feet 1 inch above the bottom of the shaft. (Figure 7.)

The maximum diameter of the column is 74.88 inches and occurs at a distance of 17 feet 7 inches above the bottom of the shaft.

PIERS WHICH DIVIDE AISLES

In the piers, at either side of the archways by which the bays communicated, were niches for statues, giving the scheme of a triumphal arch. (Figure 8.)

The arch motive was repeated on a larger scale by the arched section of the aisles and the vaulting of the nave. Thus to the observer, a realization of the size of the

[44] Bramante, Uffizi No. 1712, Antonio da Sangallo No. 32 capital.

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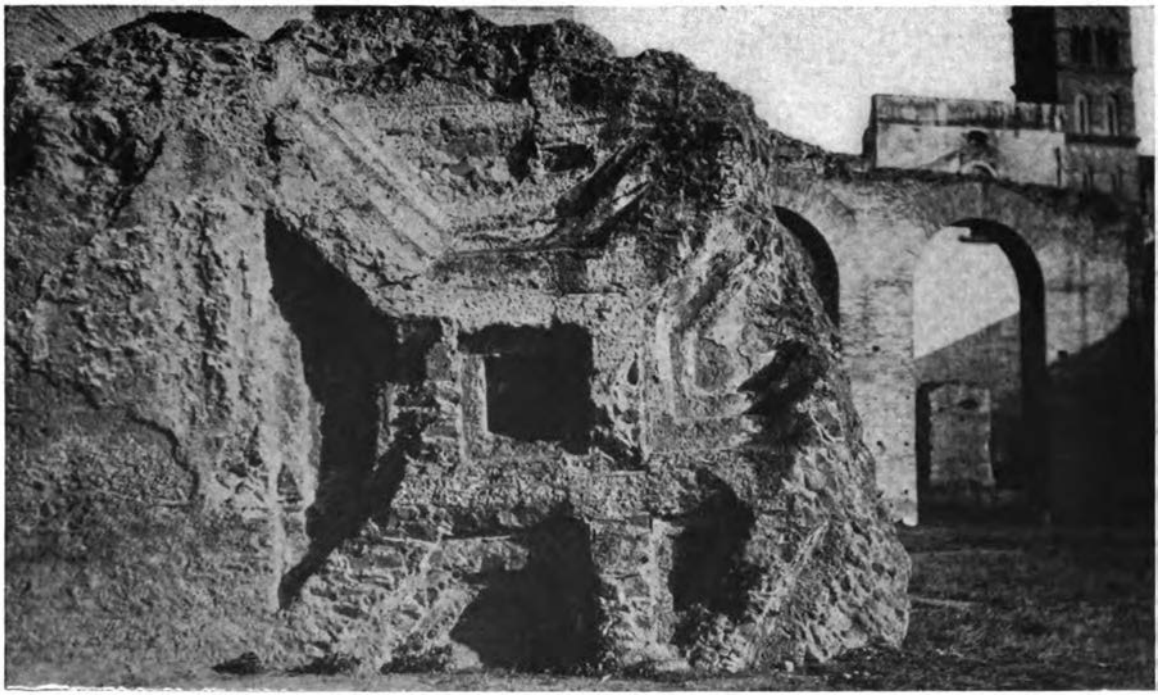


FIGURE 10.—GROINED VAULTING



FIGURE 10A.—FRAGMENT OF GROINED VAULTING

building was admirably given by the fact that the statues in the niches were only slightly larger than life-size, about seven feet in height. From these niches, the eye traveled to the arches between them, then to the larger arches at the entrance to the bays and finally to the top of the groined vaulting of the nave. In the end piers at the west, where there was no door, a square niche occupied the space between the circular niches. There are no traces of the existence of brackets supporting columns at either side of the niches, so we must conclude that the marble facing was the only decoration of the piers.

COFFERS

The coffers in the ceilings served both to ornament and to lighten the vaults. From the barrel vaults (Figure 9) in place and fragments of the groined vaults, which are still available, the method of constructing the coffers can be ascertained.

The coffers in the barrel vaults are octagonal, receding in three depths, with rows of smaller square coffers of uniform depths accompanying them. The vaults were constructed by erecting two sections of roof scaffolding to roof the bay, as far apart as the axial unit of the coffers. This wood served to support the brick ribs of the vault. When the ribs had set, the line of inverted moulds for the coffers was suspended between them. About the moulds bricks were laid following the form of the coffers, and the concrete of the vault poured on them from above. The wooden moulds could then be removed and used for adjoining rows of coffers. The smaller square coffers were hacked out of the brick ribs between the larger coffers. In the groined vaults, the brick ribbing of the groins and the brick ribbing across the nave were laid

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first and moulds for coffers placed between them in small sections at a time. The coffers of the central portions were octagonal in three depths. In the lower part, where the groined vaults rested on the roof of the aisles, coffers of squares and irregular hexagons fitted into the form. The semi-dome of the apse is indented with hexagonal coffers in four depths: these were constructed in horizontal rows as the curved wall was built up.

The inner surface of the coffers was roughened with the chisel to hold the stucco lining. The edges of the different depths of the coffers were adorned with stucco mouldings in the egg and dart and various leaf patterns. Small wrought-iron dowels, still visible in some of the fragments, were used to hold these projecting ornaments. Traces of yellow and an indistinguishable darker color are found on the stucco. It is probable that rosettes of gilded stucco adorned the fields of the coffers in the main groined vaults: we have colored the fields blue. The thin layer of stucco which clings to some of the coffers in the barrel vaults is gone at the center as though a rosette had originally occupied the space. Gilt rosettes are used in the coffered vaults of St. Peter's and other churches which show an imitation of the basilica, more of the decoration of which was *in situ* in the sixteenth century.[45]

Lighting

Lamps may have been suspended by chains from some of the central rosettes of the coffers. It is generally agreed that the bronze rosettes in the ceiling of Santa Maria degli Angeli, which date from the original construction of Diocletian, served this purpose. Other artificial light could, doubtless, have been supplied by standing candelabra. On clear days, the thirty-nine windows of the nave and aisles, together with the lunettes of the clerestory, must have furnished abundant light.

Floor

The nave and aisles were paved with colored marbles. Large portions of the concrete bedding with bits of marble laid in it for levelling still cover the floor. Parts of the pavement were found intact in the excavations of 1819, and a few fragments reconstructed at the west of the south aisle are still available. Nibby, who conducted the early excavations, observed that much of this marble had been re-worked since the backs of some slabs were fluted or incised.[46] Fea[47] mentions, among the varieties used, giallo, cipollino, porphyry, serpentino and pavonazzetto. The pattern was composed of large squares,[48] enclosing alternately circles and squares laid with the sides parallel to the diagonals of the larger squares. On the plan of Angelini and Fea, the unit of design does not fit an exact number of times into each bay; sixteen in all run along the length of the entire hall without regard to the position of the dividing piers. Caristio has seventeen squares along the axis of the building. We have restored the pavement with five squares in each bay and bands three feet wide between them since it does not seem probable that symmetry was absolutely neglected in the laying of the floor.

Caristio represented the pavement of the central bay of the north aisle as differing from that of the rest of the floor, and as composed of small double squares. Recently the removal of grass in this part of the building revealed traces of cement foundation for a pavement, the units of which correspond in size with those of the other bays. Hence we must conclude that originally the entire pavement was of the same pattern and that the excavators of a century ago were led astray by the traces of a later superimposed pavement.

Wall Decoration

The walls of the hall were veneered with marble to the top of the main cornice. Here are obvious remains of the concrete bedding in the northwest corner of the building. Some of the bronze clamps which fastened the slabs are also still affixed to the wall. Part of a white marble base about two feet high is *in situ* at the right of the north apse. The marble veneering was probably arranged in a geometrical design,[49] as is shown by the imprint of slabs in the concrete bedding and also the cramps already referred to. We have been led to adopt a broad pattern, in view of the large dimensions of the building and the consequent ineffectiveness of fine details.[50] Above the spring of all the vaults stucco was used, as is shown in many places by the stucco remains. Moreover, such a combination of marble and stucco was general in the later centuries of the Roman empire. The stucco must have been painted in the so-called floral style in vogue at the same period.[51]

West Apse

Of the decoration of the original apse at the west we have no traces. In our restoration we have supposed that the decoration of the earlier tribunal was not altered. As the consols in the so-called house of Crescentius are in the same general style as those found in the north apse, we offer the suggestion that they may have formed originally part of the ornamentation of the west apse.[52]

The west apse is somewhat smaller than the north one. We have, therefore, concluded that the smaller entablature of the two found on the site and still preserved there probably adorned the front of the smaller apse, forming a characteristic architectural screen. As the west apse was badly destroyed and then restored after the earthquake which overturned the entire south-

[45] Cf. the ceiling of S. Venantius' chapel in the Lateran baptistery; also drawings in the collection Destailleur of the basilica.
[46] loc. cit. 2 p. 243.
[47] Bas. Const. p. 12.
[48] Gauckler, Bas. Chrét. p. 16—similar floor decoration used from the fourth to the seventh century.
[49] For contemporary decoration of this type see Part I.
[50] The private basilica on the Esquiline, erected by Junius Bassus who was consul in 317 A. D., and which is therefore exactly contemporary with our building, shows panels of elaborate intarsia work. This structure was converted into the church of S. Andrea in Catabarbara and finally destroyed in the seventeenth century after it had stood neglected for several hundred years. At this time some of the panels representing animals were removed to the Conservatore palace where they are still preserved. A sixteenth century drawing of the entire wall is reproduced by Marucchi in Bull. Com. 1893 pgs. 89-114 plates IV and V. See also De Rossi, Bull. Christ. Arch. 1871 pgs. 5-29.
[51] For late wall painting at Ostia, see Calza in Mon. Ant. 1920, 26 pgs. 405, 6. Rostowzeff, J. H. S., 39, 1919, p. 162, Ancient Decorative Wall Painting, pgs. 144-163.
[52] Rivoira, Lombardic Arch. I p. 121.

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west corner of the building, we have assumed that a similar construction to that which is visible today in the north apse was adopted here: that is, piers, not bonded into the walls, supporting the ends of the entablature.

It is generally assumed that when the north apse was built and the tribunal placed in it, the place of the earlier tribunal[53] was occupied by a statue to be viewed by the spectator who entered from the narthex.

The portions of a colossal statue in the cortile of the palace of the Conservatori are now generally ascribed to a colossus of Constantine which was placed in the west apse.[54] These fragments were found in 1487[55] at the right of the stairs leading from the basilica to the Via Sacra. The head was formerly called that of Domitian and the inscription on the modern base is to that effect. Bernouilli[56] suggested that it represented Constantine on the basis of its resemblance to coin portraits of that emperor.[57] He did not press the identity further, because he considered the style too good for the fourth century and in view of the insufficient resemblance to the Constantine of the Lateran, which he believed the best portrait of the emperor. Helbig adopted this identity in the second edition of his guide to the museums.[58] The statue is fully discussed by Peterson,[59] whose opinion is accepted by Mrs. Strong.[60]

The fragments now in the palace of the Conservatori consist of the head, the lower part of the right leg, the right knee bent outward at an obtuse angle, part of the muscles of the thigh, the two feet, the right arm bent at the elbow, and the right hand. The hair had a metal wreath or diadem attached to it. The head was made of several pieces of marble. The locks of hair in front of the ears, which characterize the coin portraits of Constantine, were put on separately. A second right hand of the same size as the one found in 1487 but broken off at the second joint of the thumb is placed in the museum. This has been in the collection only since 1820 and was not found with the other fragments.[61] The two hands are finished differently. The one found near the basilica has a piece of marble left under the bent little finger, and is finished with a socket into which the lower portion of a spear was probably fitted. The position of the raised hand indicated that it held a similar object. The other hand has the marble cut away under the little finger. This hand may have been originally planned for the colossus—the measurements of both hands are the same—but it may have been rejected for some reason and left with other waste material at a place where it was found later by mere chance.

Peterson[62] points out the fact that the carriage of the head and the position of the feet, with the left heel raised, show that the figure was seated. The undraped knee points to a short tunic as part of the dress. The pose with the right hand holding a spear and the left arm bent at the elbow and outstretched is similar to that of the Zeus of Pheidias and as such Constantine appears on his coins.[63] The same author concludes that the statue was acrolithic:[64] i.e., the flesh parts only were of marble, the body of wood covered with bronze drapery. He bases this argument on the form of the dowel holes which joined the limbs to the body, visible in the section of the thigh; the fact that the use of several sections for the body, as was the case with the limbs, would have made too patched an appearance; and the disappearance of all traces of the torso, which would hardly have been the case had the statue been of stone. Moreover, the weight of a stone figure forty-two feet high would have been enormous. Wood alone would have been insufficient to support the weight of the stone head, which surely must have rested on a solid support within the body. The metal spear would have held the right hand. It is probable that the outstretched left hand, which, as the arm muscles indicate, held some object, perhaps a globe, rested on a column, as was the case of the Zeus at Olympia. No traces of any such supports are apparent.

Though Bernouilli[65] thought that the style of the head was too good for work of the fourth century, Petersen does not hesitate to assign it to this period.[66]

On the general assumption that the colossus stood originally in the west apse, the figure was drawn to scale with a pedestal in proportion to its dimensions. We found that the head of a seated figure of this size would have touched the semi-dome of the apse.

We cannot believe that anything so contrary to the laws of proportion was allowed, even in the fourth century; nor could the statue have been placed on the floor of the apse without a pedestal. The construction of the cellar of the apse does not seem to indicate that it carried any great weight. The suggestion was offered that the statue was placed not in the apse but before it in the nave. The placing of the colossus at this point would have ruined the effect of the proportions of the hall; neither are there traces of a foundation at this point. In our restoration we have placed in the apse a statue similar in pose but smaller than the colossus. (Plate III.) The latter probably stood on the Via Sacra near where it was found, though there are no visible foundations in the vicinity of the basilica. Perhaps it stood just beyond, under the present church of Santa Francesca Romana. It does not seem likely that so much of the statue would have been found together if it had been carried a great distance in the middle ages; for the size of the pieces would have made it difficult to transport many at a time. The head fell or was dragged on the left side as this part is broken more than the right.

E. P. FRANKLIN, *Fellow in Classics.*
VICTOR L. S. HAFNER, *Fellow in Architecture.*
American Academy in Rome.

(To be continued)

[53] Nibby, Foro Romano, says that remains of the tribunal were found within the west apse. This appears to be a misinterpretation of the remains of horrea still visible in this position.
[54] Huelsen, R. F. p. 230.
[55] Michaelis Röm. Mitt. VI 1891, Storia della Col. Capitolina, fig. 143; pgs. 1-61; Fea, Pianta del Foro Romano 1827.
[56] Röm. Ikonographie, 2, iii, pgs. 220, 221.
[57] Ibid, Münztafel VIII esp. No. 15.
[58] 1899 I p. 372 repeated ed 3. 1912 I p. 502.
[59] Atti dell'Accad. Pont. ser. II 7 (1900) pgs. 159-182. un Colosso di Costantino Magno.
[60] Roman Sculpture, p. 385.
[61] Peterson, Op. cit. p. 162.
[62] op. cit. p. 166.
[63] Maurice, Numismatique Constantinienne Vol. III, Plate III, 10, 23.
[64] op. cit. p. 168-170.
[65] loc. cit.
[66] op. cit. p. 174.

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"Bunk" and "The Good Old Times"

THOSE who have read, or had the good fortune to hear, the address[1] of Mr. Charles Eidlitz, Chairman of the Board of Governors of the Electrical Board of Trade of New York, before the Building Congress of that city, will need no introduction to "Bunk." But it is doubtful, should any of them be old enough to remember back more than "the last ten or fifteen years," if they have such happy recollections as does Mr. Eidlitz of what the "good old times" were in the building industry.

To him, those "good old times" bring back wonderful and happy memories. He lays them before us vividly; and we are filled with wonder that there were builders who builded as perfectly as it was humanly possible to do, in order that they might lie down at night at peace with their consciences. Mr. Eidlitz cannot place these ideals of these old time builders too strongly before the industry of today.

With this picture in mind, one who knows only the builders of today cannot but shudder when he considers what must have been the state of mind and the principles of the ancestors of the myriad of present-day builders whose walls are torn down because the perfect bricks are all on the outside and there is no mortar behind the beautifully pointed-up joints!

The memories of one generation, to become the traditions of later ones, must be practiced and carried down through succeeding generations, and I am certain that this generation is appreciative that Mr. Eidlitz is perpetuating the fundamental principles of honesty in work and service which he learned from his father. Would that every contractor of today had been so taught! Mr. Eidlitz himself suggests that not many of them are tearing out the work which they have placed at so much trouble and expense because they have discovered that it was not so perfect as it was humanly possible to have done it, and then are building it back again, as it should have been done in the first place, at their own cost and with full recompense to those others whose work has been damaged.

The conception of the duty and obligation of the contractor to his work and to all about him advanced by Mr. Eidlitz is splendid in its lessons and its idealism, but he rather lessens its effectiveness when he makes it apparent that the present day owner does not ordinarily pay enough to permit the walls of his building to be torn down and replaced at will by the conscience-stricken contractor. Mr. Eidlitz does suggest a way in which this can be accomplished and leave everybody happy at the ending—the cost-plus method! Truly one wonders if this cost-plus idea must not have been entirely familiar in all its possibilities to the builder in the "good old times."

Speaking to the manufacturer, the general contractor, the sub-contractor, the banker and the representative of labor, all elements of the building industry of which he is a part, and strengthened by those memories of the old perfect days when there were only perfect bricks, perfect joints and perfect mortar, Mr. Eidlitz strikes boldly where he says that others have hesitated. He classifies some elements of the industry; the architect is a "pianissimo" sort of a chap; quieter and still more delicate is the contractor, and still further down is the sub-contractor, each more soft-spoken and vacillating as the scale is descended. The sub-contractor, apparently alluded to as a "poor, half-starved, irresponsible, fat-headed fish," seems to be the original "pussyfooter." What about the other elements of the industry? Labor and the banker are not classified, and the speaker is silent regarding them. Did he do a bit of "pussyfooting" after all, or did he just consider these elements of little consequence in his scheme of things?

Mr. Eidlitz declaims that he is looking for "Bunk," for something that he may "mark or stake it out and leave it exposed and naked like a September Morn." The thought is sufficiently shocking to make us all follow the speaker avidly, waiting for the exposé. He leads us on and gets us all worked up and excited, only to uncover a flea—Bunk indeed!

Finally Mr. Eidlitz gets upon familiar ground and puts forth that well-known lamentation of the low bidder which each one sets up after the bids are opened and he finds that he might just as well have had a few more thousand dollars of the owner's money. He loudly exclaims that he has made another "honest error" and committed the one unpardonable sin of a contractor. So quickly does what was intended to be a clever bid loom up as a nefarious contract!

Should not the contractor have foreseen this result and devised some method whereby this difference could be obtained from the owner? The speaker suggests that error, that unpardonable sin of the "honest mistake," which is leading the industry to ruin, can be corrected, insofar as his particular field is concerned, by getting those particular tradespeople together and that, when together, they could fix a fair price for his particular trade. I wonder where the present generation learned that—from the good old honest days, or was the "gentlemen's agreement" developed in our own times? Evidently the thought has taken hold, for the speaker refers feelingly to the Sherman Act and suggests that, when it comes to making a choice between going to Sing Sing and letting "the poor chap who made an honest mistake" ruin an entire industry thereby, there is no use going to prison!

But Mr. Eidlitz is not done with his search in Bunk; the flea is still elusive. He tells of the honest traveler who, overchanged by the ticker seller, returns his surplus to the railroad company, and so misses a train. The conscience of that ticket-buyer surely worked very slowly. Mr. Eidlitz paints a picture of the wife and children of this traveler, waiting expectantly at home for the return of this husband and father who has missed his train. You can see the homecoming of the honest buyer of tickets; the pathos of the scene is familiar, I am sure. And any of you who have tried, perhaps, however, under different circumstances, to explain a missed train,

[1] This appeared in part under the title, "The Quality and Quantity of Buncombe," in the JOURNAL for March.

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can imagine with what success the honest ticket-buyer got away with his story. It is too bad that Mr. Eidlitz failed to finish his picture and paint the railroad demanding its pound of flesh from the poor short-changed ticket seller to make good his "honest mistake," in the same vivid colors with which he paints the owner who requires the contractor, who has just made one of his "honest mistakes," to put his "John Hancock" on the dotted line.

The whole argument of Mr. Eidlitz is an indictment of careless and unreliable methods of the contracting industry, of irresponsible contractors and their slip-shod methods, and he is unquestionably on solid ground when he pleads for more competency in the contracting elements of the industry, and for more honesty in workmanship. He cannot be serious when, with considerable logic, he asks why a sub-contractor or a general contractor or even an architect should try to do anything more than he is absolutely compelled to do. In the "good old times" a man felt that his work represented his honesty and ability. Mr. Eidlitz asks, "Is that the condition today?" He cannot mean to leave with us the impression that the sub-contractor, in a lesser degree the contractor and even the architect are not compelled in this generation to exercise ability and to be honest. Nor can he seriously expect that any of these elements of the building industry, to whom ability and honesty may be denied, will acquire these virtues because of his stereoscope and his "Lost Clause."

It is not possible; and so the ending of the tale is as it was in the beginning: ***Bunk.***

EDWIN BERGSTROM.

London Letter

The first three months of the New Year with a Labor Government in the saddle have not been without excitement. The building trade is on the qui vive for the revival of housing on an extensive scale, architects are hoping with an anxious expectancy, and bricks have become significantly scarce. And while the government has been debating its schemes, the Trades Unions have been testing the ground with a pair of highly inconvenient strikes, which have sent up the cost of building very slightly in sympathy with an increased cost of living. It is practically certain that an extensive housing programme will be entered upon, and the Minister of Health has been negotiating with the Building Trades Unions with a view to solving the problem of shortage of skilled labor due to the steady rejection in the past of any scheme of dilution which would permit new men to be trained in any number. The unions desire guarantees for continuity of employment; they do not seem to realize that if labor were readily available, and at an economic rate, the danger of unemployment would automatically cease.

The question of materials for housing is naturally again to the front. The *Daily Mail* assures its vast public that concrete houses will be the solution, while the R.I.B.A. wisely reminds the authorities that experience has shown that so far pre-war building methods in brick and timber have not been surpassed either for quality or cost. Concrete blocks have been proved satisfactory, but as the unions insist that the laying is a bricklayer's job, one of the main claims of concrete construction is automatically nullified.

* * *

The more serious questions of the day have been happily relieved by lighter incidents. One of these is a proposal, emanating from the Society for Prevention of Cruelty to Animals, to erect a memorial in Hyde Park to the animals which perished in the service of mankind in the Great War. The idea was not without a certain beauty, but unfortunately the proposed memorial became known as the animals' cenotaph. Anxious enquirers wrote to ascertain whether, besides horses and dogs, insects and birds were also to be commemorated, and it was pointed out that as mice were used in submarine experiments they must *ipso facto* be included. Then some recalled that goldfish were used as gas detectors and suggested that the memorial be known as the "Tomb of the Unknown Goldfish."

But in spite of ridicule, the proposal is still alive.

* * *

The R.I.B.A. Academic dress proposals also help to lighten dull days. The proposal to adopt academic dress was recently quashed. It has now been revived, and an energetic body of its supporters, at a recently convened general meeting, caught the opposition napping and pushed it through. So gowns are to be worn, and tailors are tendering. The only cloud is the prospect of another meeting which is being convened with the idea of rescinding the resolution of the last meeting. The whole thing is rather a farce and lowering of the dignity of the Institute, which has some really serious work on hand just now.

* * *

One of the problems is a revived proposal for absorbing the Society of Architects and obtaining Registration through this Unification. Negotiations between the Councils of the two bodies have reached an advanced stage, but neither can be certain as to what will be the feeling of their general body of members. A certain section of the Institute, calling itself the "R.I.B.A. Defence League," has circularized the majority of the Associates, advising them, in vehement sentences, against amalgamation with the Society. This so-called Defence League is a very political coterie, and was responsible for the composition of the last Council which was so completely defeated at the recent elections. The question of amalgamation is a very important one for the profession, and it is rather disgraceful to see this rabid propaganda against proposals which have not yet been even tabled, so that fair criticism of them is manifestly impossible.

* * *

Everybody is interested in the wonderful model known as the Queen's Doll's House which is to be exhibited at the Wembley Empire Exhibition, and which will prove one of its biggest attractions. It is the extraordinary realism of this model house which attracts. Everything

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in it is complete, to 1" scale, and it has been designed and decorated by the best craftsmen in England. About 1,600 people have contributed, the whole design being co-ordinated by Sir Edwin Lutyens, who planned the house.

The house is in the Wren manner, and has a frontage of about 8' 6", with a height and depth of 5' 0", and contains nearly 40 rooms and halls. Each room is completely designed and furnished down to the smallest detail, with ceilings and wall paintings executed by such men as Sir John Lavery, D. Y. Cameron, Edmond Dulac, Charles Sims, William Walcot, Gerald Moira, and a host of others equally talented. The model was built in a studio in Sir Edwin Lutyens' own house, and has had to be completely taken down for removal to Wembley.

* * *

England has fallen into line with France and the United States, and has received as a legacy from the late lamented Conservative Government a Commission for the Fine Arts.

With Lord Crawford as President, Lord Curzon, Mr. D. G. Cameron, Sir Edwin Lutyens, Thomas Mawson, and a few other good names on the list, the Commission has prestige and weight, which it will certainly need, as its powers are advisory and not executive. It will be able to make recommendations, but will in itself have no actual power of veto. The Commission has everyone's wishes for a successful and useful career, if it will not lay a too heavy hand on initiative and imagination.

Most of us in England find in the American architectural magazines a tonic to the mind and a joy to the eye; and the written articles are sometimes not without spice. But sometimes we feel disappointment at the expression of some narrow point of view which comes as a shock from a country of modern progress. In this category are the criticisms on modern work of Mr. Egerton Swartwout in the *American Architect and Architectural Review*, where he conducts an otherwise interesting Literary and Pictorial Architectural Digest. Anything modern in feeling or expression appears to be anathema to this writer. He condemns without reason and with astonishing catholicity. Work which he does not like is "nonsense." It is interesting to watch the vigorous riding of a hobby, but we expect a little logic in our architectural criticisms from the United States.

* * *

Architecture continues to make periodical appearances in literature. After Mr. Aldous Huxley's "Antic Hay," mentioned in the last "Letter," there comes a four-verse poem in the *Nation and Athenæum* by Robert Graves, describing an architectural progress through Oxford. The following verse describes the architectural dry-rot which is creeping over the outskirts of the city of dreaming spires:

So to Summertown,
By 'bus, to a row of post-war villas, neurotically built,
Standing each at different curious angles to the road;
Each with the most extravagantly individualistic shrug and tilt
Of roof, wall, porch and gutter, as though each abode—
"Rosslyn," "Sans-Souci," "Mons"—defied the sergeant-major—would not dress—
Dumbly blaspheming Banbury Road's ordered pretentiousness,
The semi-detached pairs writhing in a loveless caress.
March, 1924. "X."

Architecture and History

Within the last century, a new kind of history has come slowly into existence, a history which is not concerned to record events by themselves; rather it seeks to recapture the whole setting in which events and people had their being, and as a result the scattered stones of history are now being organized into buildings, so that one may literally re-enter the past. The idea of history as a drama, with a stage and a cast of characters and the thread of a plot running through it, does not supplant the conventional chronicle, but gives it a reason for existence; for wars, political struggles, and natural disasters are little more than the punctuation points in the story of a community's life and arts.

In building up this notion of history, nineteenth century students of architecture, like Ruskin, Viollet-le-Duc, and Burckhardt, played an important part, and in books like Faure's *History of Art*, Adams's *Mont St. Michel and Chartres*, and Mrs. Taylor's *Aspects of the Italian Renaissance*, the method is now in full swing, and the tradition firmly established.

It is unnecessary to emphasize here how, for lack of a spiritual understanding of the past, the architect has again and again attempted to reproduce forms which no longer have a legitimate reason for existence. The whole period of Gothic construction, which began with Horace Walpole's Castle on Strawberry Hill, was founded upon the complete inability of the eighteenth century architect to understand the mediæval heritage, so that even when he respected the mediæval precedent he succeeded only in caricaturing it. Down to the time of the Oxford movement in religion and the Pre-Raphaelite movement in art, Gothic architecture was associated with ghosts, dilapidation, and gloom; and its typical virtue was supposed to be a sombre disorder, which, it is true, harmonized with the dingy aspect of early industrialism.

Ruskin and Morris altered this conception, no doubt; but Ruskin was too much of an evangelical Protestant to enter fully into the spirit of mediæval life; and Morris was, on the whole, indifferent to anything but its secular manifestation in the guilds. It remained for Henry Adams, in his magnificent account of *Mont St. Michel and Chartres*,[1] to insinuate himself bravely into the very flesh and bones of the mediæval order, from the 11th to the 13th centuries. It is not merely by examining the

[1] *Mont St. Michel and Chartres*, by Henry Adams. Houghton Mifflin Co.

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transition in building from the round arch to the ogive from the formidable, military virtues of early Norman work to the playfulness and exuberance of the thirteenth century, that Henry Adams makes the forms themselves intelligible. By responding to the brave notes of the "Chanson de Roland," by repeating the prayers of the monks, by arguing on dialectic with Abélard, by currying favors from the Queen of Heaven, Adams conveys the overtones of mediæval architecture—and without those overtones the cathedral itself is silent.

Who can follow Henry Adams through Chartres, from tower to nave, from nave to choir, from choir to the Lady Chapel, and thence to the windows, and still feel that here are mere forms which can be imitated or adapted without taking over the life that created them? Who could think that the stones shipped f. o. b. from any quarry anywhere would play the same part in a modern building as the stones that were dragged in solemn procession by the whole community, the quarry at Berchères-l'Evêque being five hard miles away? Who could fancy that these glorious windows could be built again without the help of the guilds, or that craftsmen could work wholeheartedly on a building in which they had no impulse to pray?

I doubt if a single "mediæval motif" would appear on a modern building if the architect had read and really assimilated *Mont St. Michel and Chartres*—unless, like Dr. Ralph Adams Cram, he had the courage to go further and seriously advocate a return to a universal and authoritative religion, to handicraft and Walled Towns. History, as it is portrayed by Henry Adams, leaves no place for the practice of archæology, either pious or profane; for the more one understands the past, the more one sees how impossible it is to recover it by any external device, except as a masquerade.

This observation remains just as pertinent when we turn to the Renaissance, for despite the assurance of Sir Reginald Blomfield and Mr. H. Van Buren Magonigle that the Renaissance is still with us, the historian has a different tale to tell. In a vivid presentation of *Aspects of the Italian Renaissance*,[2] Mrs. Rachel Annand Taylor has given us a picture that is as rich in texture as the paintings of Veronese—a book that is not merely a last word *on* the Renaissance, but also, one is almost tempted to say, the last word *of* the Renaissance. Mrs. Taylor begins at the point where Henry Adams leaves off: she depicts the Mediæval Dream, dissolving before the light of the Renaissance morning. In a hundred graphic sketches and interpretations she puts the whole scene before us, showing the complex of social and political and intellectual conditions, and discussing the personality and work of the scholars, the artists, the courtiers, and the decisive, intelligent women of the Renaissance.

The individuality and uniqueness of Renaissance art and architecture, as they lived through their first moments of history, are brought out by this survey; and at the same time, we acquire a criterion for dealing with modern manifestations of the "mode."

"It seems amazing," says Mrs. Taylor, "that these early Renaissance folk knew so well how to adore without imitation. Donatello was at Rome with Brunelleschi in 1403, and an enthusiast; yet no work of his swerves from his hybrid but original inspiration. Ghiberti writes with delight concerning certain relics, buried perhaps by 'some gentle soul' during the Christian rage of iconoclasm; but no Greek or Roman would have imagined the Baptistery gates his way. Botticelli hears of Aphrodite, but she rises anew from the pale, sad seas of his individual dream. . . . The Greeks sought after abstract beauty of form, the pure archetypal dream. But the Renaissance man had learned the passion for expression, and could not do without the precious differences—which, though they may violate some canon of rhythm, yet hold a troubling secret of more penetrative charm. Things had to be not only beautiful to the Renaissance man, but '*strangely* beautiful.'"

Without the turbulent, highly energized social life that existed in the court of Lorenzo or Nicholas V, without the sudden expansion of the spiritual horizon, without the quickened scene of discovery, without the dazzled realization that the five senses are no longer five sins—what is there left of the Renaissance inspiration for modern architecture? The Gates of Heaven have been assaulted; the terrestrial world has been explored; and even our small Lorenzos—multiplied in financial power but shrunken in stature—eat shredded wheat, do their daily dozen, and entrust their largess to pious foundations, which endow prayer-wheels of red-tape. Like a revolution, a re-birth cannot be prolonged forever. One sees plainly that a good many modern buildings, done in imitation of the Palazzo Riccardi or the Tuileries, are little more than the afterbirth of the Renaissance impulse—a mere, inevitable residue of the great act itself.

What is called Renaissance architecture today has nothing to do with the original Renaissance movement: it is merely characteristic of our dreadful facility in imitation, and it expresses the willingness of even the architect in a machine-age to accept a pattern for cheap reproduction instead of undergoing the abysmal labors of creative design. Even what is best in Renaissance architecture does not spring from our own life directly: it comes from that fragment of it whose curiosity and acquisitiveness are served by museums. If the new study of history does nothing else, it at least makes plain the difference between a living form and a death-mask. Since this history owes its original impulse, in good part, to the students of architecture, it is not too much perhaps to hope that architecture will in turn profit by its implicit lessons. Even if we are monks we can no longer build Mont St. Michel; even if we are merchant-princes we can no longer have someone create a Villa Medici for us; for the overtones are lacking, and the chief note that the old forms sound in the modern environment is servility or snobbery. Architecture, as Professor Lethaby well says, is "form in civilization," and woe to the people or country where the form has become, in the narrow sense of the word, "good form"; for the past has nothing to offer us unless the present has even more.

LEWIS MUMFORD.

[2] *Aspects of the Italian Renaissance*, by Rachel Annand Taylor. Houghton Mifflin Co.

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Housing and Community Planning

CLARENCE S. STEIN, *Associate Editor*

The Pittsburgh Plan

In 1911 a City Plan Commission was created for Pittsburgh. Its authority ceased at the political boundaries of the community and its labors had hardly commenced before it became evident that city planning is concerned with geography rather than with voting districts. For the purpose of broadening the terrain, a County Planning Commission was organized in 1913 and later the Citizens' Committee on City Plan, an unofficial body, whose function was to co-ordinate the labors of the two formal commissions, came into being. It did not confine itself, however, to a passive role, but spent much time and money in the issuance of plans and pamphlets dealing with specific details of the problems. Two of these studies cover Transit and Playgrounds.

TRANSIT

Between the Monongahela and the Allegheny Rivers, just before they unite to form the Ohio, is a wedge-shaped area bounded at the open side by hills. Its extent is less than a square mile. It is the TRIANGLE. Here executive and mercantile Pittsburgh sits enthroned. Pittsburgh is growing. There are now almost 600,000 people within its political confines. Soon there will be one million. Many additional thousands dwell in the suburbs and each day a large proportion of this vast population enters and leaves the Triangle.

The Triangle needs more floor space for its adding machines. More floor space means more people. At the rush hours the streets are packed to refusal with 700 street cars, unnumbered automobiles and pedestrians. As Carlyle says in his French Revolution, "What to do?"

Clearly, the problem is one of finance and engineering. By ingenious loops, cut-offs and subways, the rails can be made available for several times 700 cars. The subways will be built to serve first the surface equipment and eventually a high speed system covering a territory of 100 square miles. In its final development, each artery will be directly connected with the Triangle, and as far as the maps now show, there will be no effective connecting rings or by-passes.

As engineering-finance it is admirable, but when presented as a "Solution of Congestion," I become a dissenter, for of all methods of increasing congestion, the Pittsburgh Transit Plan is one of the very best. It is New York over again on a somewhat smaller scale.

To be sure Pittsburgh has a zoning ordinance under which the height and bulk of buildings and incidentally the occupying population are limited, but when the new transit scheme gets well under way, an irresistible demand will arise for higher and bigger structures than allowed under the present code. The regulations will break down. It cannot be otherwise.

Working under a proper plan, zoning is beneficial and effective, but unfortunately only the most summary planning is necessary before launching an all-embracing zoning ordinance. It has become the present-day fashion. It holds things as they are—a very strong appeal to many influential interests. It is cheap; it is speedy and for a time at least, it stops the pain. But to impose a limit on floor space and then to dump on it every morning twice as many people as it is designed to carry does not make sense.

Experience teaches us that subways invariably stimulate the packing of the population and as far as I know there has been no noteworthy exception to this rule. This being so, there must be some reason why this class of public utilities cannot be built unless labelled "Relief of Congestion." Perhaps the answer can be found in the fact that more people mean higher real estate values; a timid suggestion and possibly very wide of the mark.

City transportation is generally privately operated and bonds cannot be marketed unless a profit be anticipated. The more a subway costs, the more fares it must collect. If the banker can be assured that the cars will be jammed, he will float the bonds. Subways are built not to move a present population in comfort, but to move an increased population in the same amount of discomfort that the road is advertised to alleviate.

The Pittsburgh Transit Plan promises a relief of congestion by increasing facilities and by creating new population centres. Human habitations mass themselves at cross roads and the maps show but one important meeting place, the Triangle. There is no doubt that the scheme will provide more cars and that it will stimulate suburban building, but it is no less true that decentralization is not part of the idea. The Triangle will get the business. This may be good financing but it has precious little to do with planning.

Therefore, as long as city transit is regarded as a profit-making enterprise, even though limited, the nucleii of our cities and of Pittsburgh in particular will be forced to support a steadily increasing human load.

Which, after all, may be an altogether desirable consummation and if I believed in it and if I lived in Pittsburgh, I would vote for it.

PARKS

The report on Parks deals with human welfare and is not concerned with finance. This does not imply that the open spaces are extravagant in area or in cost, but it means that the return on the investment is expressed in terms of human contentment and not in money. In planning, the point of view is everything.

In presenting the case for Transit, the Committee had to plead the cause of decentralization in order to justify a plan that is concentration itself, but as to the parks no such screen was deemed necessary. It surveyed the field and proposed parks and playgrounds in locations where they would do the maximum amount of good, suggesting the design and equipment most fitted for each particular site. It is a good plan, well thought out and most intelligently advocated.

Any city desiring the execution of its plan could not do better than to study the work of the Citizens' Committee. The technique of enlisting public opinion is most difficult and one can disagree with some of the recommendations and retain a profound admiration for the presentation.

JOHN IRWIN BRIGHT.

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The Secretary's Page

24. While I realize the last Secretary's page has not at this writing appeared in print, I like to believe, or possibly I am forced to believe, that the thought of mentioning in the Secretary's page those Chapters that have sent in their minutes has brought a marvelous result. Three weeks ago all the results in this line that had accrued to the Secretary's office were reports from 9 different Chapters. Some leaven has been working. In the three weeks elapsed I have already received reports from 14 Chapters and one Society, all reported below.

BOSTON, WASHINGTON STATE and CHICAGO issue printed leaflets. UTAH sends out a nice blue printed sheet, called "Irregular Curves," and the balance of the Chapter reports are typewritten or duplicated. The ILLINOIS SOCIETY sends in the January number of its interesting *Monthly Bulletin*. The Secretary notes with interest that with the exception of the WASHINGTON STATE *Monthly Bulletin* (which carries a little local advertising) all the leaflets are without advertising. ST. LOUIS minutes arrived for the entire past year.

The GEORGIA CHAPTER report brings up a condition which the Secretary does not understand, but it shows unanimity of Chapter action and a willingness to stand together when the occasion arises. Apparently the city has attempted to apply a tax on the practice of architecture, and one firm of architects has made a test case by entering a restraining order against such action on the part of the city. As such an action might easily be expensive, the Executive Committee of the Chapter offered its financial backing to the firm in question and at a special call meeting the Chapter endorsed this act and made it a Chapter affair.

SOUTH CAROLINA holds a winter and a summer meeting: both interesting reports have just been received. They have done one thing new to the Secretary's experience which has possibilities: appointing a special committee to investigate and recommend to the Chapter the services of reliable and competent structural engineers and heating and ventilating engineers.

NEW YORK'S December minutes give the news that they have decided to invite members of the NEW JERSEY, BROOKLYN and PHILADELPHIA CHAPTERS to attend their February meeting. NEBRASKA again is setting a very pretty standard. Comes to the Secretary's office their February *Bulletin*, with the annual meeting minutes, announcement of the February meeting, comments on Regional meetings as spoken of in Boston and New York, and the announcement of a Chapter Competition for the design of the *Bulletin* cover, all worth reading. Interest in the Small House Service Bureau work and the very sane way they are taking it up is most encouraging. The minutes of the annual BALTIMORE meeting also are in. The February meeting of the DAYTON CHAPTER shows active interest in civic matters. One meeting of the CONNECTICUT CHAPTER was a luncheon with members of the Architectural Faculty of the Yale School of Fine Arts.

The GEORGIA CHAPTER has endorsed the Better Homes in America Movement and has appointed a representative to work with the Atlanta Chairman, a fine move. The Secretary hopes other Chapters will follow.

Minutes of the 296th meeting of the WASHINGTON STATE CHAPTER have been received. The response from the various Chapters to the letter from the WASHINGTON, D. C., CHAPTER, asking for help in the District Registration bill is encouraging.

25. The Secretary notes with interest the circular telling of the purposes and methods of the Architectural Department of the American Baptist Home Mission Society, 23 E. 26th St., New York City, which strongly recommends the employment of architects for all church work at standard fees. This department criticises architect's plans, does preliminary sketch work, and makes a charge of one per cent, to be deducted from the architect's fee, so that there is no additional cost to the client. It is organized to run without profit. "The role of the Department is that of consulting architect." The Secretary regrets that the profession has allowed such a condition to arise.

26. Why is it that such things as this, such things as mentioned in the article on Lutheran Church Art, such a large misunderstanding of the profession in general building, can be happening throughout the United States? I am afraid that the profession itself is to blame to a great extent, and that some study and some real constructive work on the part of the profession is needed. Hind sight is always better than fore sight, as is evidenced by the following letter which opens the way to almost any sort of argument you may desire.

"AMERICAN INSTITUTE OF ARCHITECTS.

Gentlemen:

I have had a house built for me on which the builder guaranteed the work for two years. I have paid for the house but still owe him for a garage recently built.

The woodwork around the doors has developed very apparent cracks where the joints come 2/16, 3/16 or even 4/16 inches wide, probably due to shrinkage. Also the same cracks are quite in evidence around the windows. There is also a *good deal* of shrinkage in the moulding around the edge of the floors.

He claims he should not have to pay to make this work good, and that I should do so if it is done. Will you please advise me which is right. I have refused to pay for the garage in full until he does the work referred to. I will appreciate very much your reply. He has suggested that I ask your opinion. I would add that I did not employ an architect (foolishly).

The house was finished 10 months ago."

27. The Secretary was present at the first Conference of the Small House Service Bureau in Minneapolis 11 and 12 Feb. A Directors' meeting of the National Body was held, officers for the ensuing year elected, and the program for the year's work laid out, following the two days' hard work of the conference which was represented by delegates from five Divisional Bureaus, and a representative from the Southwestern Bureau, in process of formation at St. Louis. At the dinner on 11 Feb. the Director of the National Bureau gave a summary of the

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promotional work for the Bureau and what it had accomplished, emphasizing that the Bureau was placing the architect before the public steadily, advancing the work of the Institute and the architect almost daily. Each week, in some 75 papers, the Bureau's Clinic blankets the country, and the names of the Institute, the Department of Commerce, and the Bureau appear in each piece of copy.

Pre-Convention Notes

The Executive Committee of the Institute has just had its meeting in New Orleans, happily combined with the conference of the Seventh Regional District, full account of which is given by a special reporter of the JOURNAL.

The Secretary feels that the two sessions of the Seventh Regional Conference, at which the officers were so fortunate as to be present, confirmed his belief that Charles A. Favrot, the Director of the Seventh Regional District and the originator and father of the Regional District idea, really did something when he conceived the whole plan. The thoroughly informal discussion, comments and the camaraderie developed could not but be of value. Incidentally the Secretary believes that NEW ORLEANS has made good on its past reputation of hospitality and its treatment of visitors. Not only was the conference able to confer, but the Executive Committee was able to execute and at the same time get a taste of what Mardi-Gras in New Orleans is in this age.

Later some of the officers went to Dallas and attended a meeting at which all the local members of the Institute were present. Dallas showed the officers that its slogan of "It's in Dallas," could be lived up to. Then the Secretary's travels took him to Washington, where he was invited to the monthly meeting of the WASHINGTON, D. C., CHAPTER, and the delightful exhibition in the Art Centre rooms.

Judging from a conference at which six Chapters were represented, from the meetings of the Dallas architects of the WASHINGTON, D. C., CHAPTER, there are certain very important questions occupying the interests of the architects at large. These are the questions of competitions, regular and irregular; and of the Questionnaire on Architectural Relations. For the latter, the Secretary would like to say that there is evidently a misunderstanding in a large portion of the Institute as to why the Questionnaire was sent to all of the members. May the Secretary answer this by saying that it was sent to them to answer? It is the duty of every Institute member who feels that his membership is worth anything at all to answer this Questionnaire, regardless of whether he fully understands the questions as given, or whether he approves of them or not. In this way only can the Committee work out for the benefit of the profession a cross-section of its opinion throughout the United States on things most vital to its future.

And this brings the Secretary directly to the matter of the coming Fifty-seventh Convention at Washington, to be held on 21, 22 and 23 May. It will be notable in that the program is simple and elastic, and will open the way for intensive and valuable discussion of the questions of the day. The Committees of the Intitute, during the past year, have done much work and their reports will call for most careful consideration by every member of the Institute, and it is to be hoped that delegates from every Chapter of the Institute will be present. He wishes also to say that any Chapter that is not represented is forfeiting an opportunity to take part in discussions that will have a bearing upon the entire future of the profession.

The Convention will bring no special expense upon the delegates for a banquet. This year the banquet will be omitted. Instead an excellent program for the last afternoon is being arranged. Some particularly interesting things in Washington will be shown to the delegates and members at the Convention under unusual auspices. The Secretary of Commerce has issued an invitation to the Institute to visit the Bureau of Standards, and see all the work being done under the Department of Commerce along lines pertaining to building and construction. The entire Bureau of Standards will be thrown open to the visiting members, and the staff of the Department of Commerce and the Bureau will be our hosts. May the Secretary add that his acquaintance with a small part of what the Bureau of Standards is doing makes him feel that this is an opportunity not to be missed?

A brief summary of the Convention Program might be given as follows:

Opened by the President, of course. Followed by the Board's Report which will set the general program and open the way for discussion of all of those matters brought up in the Institute during the past year.

Do not forget that there are amendments to the By-Laws being offered which may affect each of you directly and your action is necessary at the Convention. Certain interesting subjects will be discussed by speakers of note and the Convention in general will be a get-together, get-busy, get-action Convention.

As a last word to each member in the Institute, to each officer of each Chapter, see to it without fail that every Chapter, including the three Texas Chapters just formed out of the old TEXAS CHAPTER, has as many of its delegates as possible at the Convention so that he can carry the proxy if necessary for his other delegates and that every Chapter will have its say in what we are going to do. The Executive Secretary tells me that the membership as a whole, and Chapter officers in particular, will receive various notices and letters which will give them complete and definite information concerning the details of the Convention program, hotel headquarters, equalization of delegates' expenses, and similar matters. We will try to get the Convention reports of standing and special committees into the hands of each Chapter Secretary by 25 April. It is suggested that every Chapter now arrange for a meeting in early May to discuss these reports and instruct delegates.

FOR President, Milton B. Medary, Jr., of Philadelphia, has been nominated by members of the following chapters:

BOSTON: H. H. Kendall, Harry J. Carlson, R. Clipston Sturgis, Chas. A. Coolidge, Robt. P. Bellows, Arthur W. Rice, J. Lovell Little, Henry F. Bigelow, William Emerson, R. A. Cram, H. W. Gardner, Wm. H. Lawrence, John Hutchins Cady, F. Ellis Jackson.

PHILADELPHIA: Wm. J. H. Hough, Howell L. Shay, H. E.

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Hendrickson, G. Edwin Brumbaugh, Wilson Eyre, Percy Ash, John F. Harbeson, Wm. D. Hewitt, Albert Kelsey, Arthur H. Brockie.

SOUTHERN PENNSYLVANIA: J. A. Dempwolf, Reinhardt Dempwolf, John B. Hamme, G. Frank Witman, Edw. Leber, Geo. F. Gemmill, Robt. A. Stair, W. B. Billmeyer, F. G. Dempwolf, C. Emlen Urban.

VIRGINIA: Frank C. Baldwin, Philip N. Stern, Chas. J. Calrow, Finley F. Ferguson, John K. Peebles, R. Maury Browne, Benj. F. Mitchell, Marcellus E. Wright, Merrill C. Lee, Wm. C. West, A. G. Lambert.

WASHINGTON, D. C.: Waddy B. Wood, T. J. D. Fuller, Arthur B. Heaton.

For President, D. Everett Waid, of New York City, has been nominated by members of the following Chapters:

KANSAS: Goldwin Goldsmith, Chas. W. Shaver, Ralph E. Scamell, A. R. Mann, H. G. Overend, Lorentz Schmidt, Harold T. English, W. E. Glover.

SOUTHERN CALIFORNIA: Myron Hunt, H. M. Patterson, Elmer Grey, J. E. Stanton, Geo. J. Adams, Pierpont Davis, Harwood Hewitt, H. C. Chambers, Sumner M. Spaulding, David J. Witmer, Fitch H. Haskell, Leffler B. Miller, F. R. Wyckoff, Chas. R. Johnson, David C. Allison, A. M. Edelman, Gordon B. Kaufman, S. R. Burns, Sumner P. Hunt, Edgar H. Cline, Reginald D. Johnson, Paul O. Davis, Geo. Marko, E. L. Taylor, Coy C. Mitchell, C. K. Aldrich, F. W. Walker, J. E. Allison, Henry F. Withey, Julian T. Zeller, Harold O. Sexsmith, G. F. Ashley, Albert C. Martin, A. C. Zimmerman, W. M. Somervell, A. F. Resenheim.

These nominations supplement those published in the JOURNAL for March.

The Seventh Regional District Conference

The first regional conference of delegates from Chapters in Texas, Mississippi, Arkansas, Tennessee, Alabama, Georgia, Florida and Kentucky was called to order on the two days following the most brilliant and colorful Carnival ever held in New Orleans. Even the most prejudiced of old-timers admitted that Mardi-Gras this year surpassed anything previously known. The conference was opportunely timed to follow the regular semi-annual meeting of the executive committee of the Institute in New Orleans on 2 and 3 March, the culminating days of the Carnival season. And it is worthy of record that in spite of all the intoxicating revelries with which they were surrounded, steadfastly putting aside all solicitations to be frivolous, the honorable board of directors of the Institute pursued its deliberations to a finish with Spartan fortitude and determination.

With the exception of SOUTH GEORGIA and FLORIDA all Chapters in the district were represented at the conference, and at adjournment it was the enthusiastic opinion of all that the meeting had been an undeniable success, that following appointment of the new regional director plans should be laid to insure larger attendance at the next meeting and that a fixed date should be set aside for it.

The most significant impression gained from the conference was the deep interest manifested by all delegates in the regional idea itself. While the effects resulting from consolidating the chapters into geographical groups cannot now be foreseen it was evident at this meeting that those present felt assured that new and wider opportunities will be presented for service and the consideration of problems toward the solution of which progress has up to now been slow and uncertain.

The last hour of the business session was given over to a discussion of the questionnaire of the Architectural Relations Committee. Only the first inquiry was attacked but in searching for the true interpretation of this clause alone so many related problems were brought to light that if in replying to this document in full architects tell all they know about prevalent methods of financing and executing building projects, it is evident that this committee will have performed a service of incalculable value to the profession. Yet the busy architect will probably be inclined to pigeonhole this thought-provoking document. He will want to write a full and carefully considered reply to each proposition in it. If he is an optimistic opportunist he will resolve to do this on the first idle day that turns up. The conscientious man will sit down to his task with the intention of performing it thoroughly and to the best of his knowledge and belief, but before writing a line he will scratch his head and will start thinking on this point—What is an architect? What has he been? What is he now? and, What is he coming to be?

The present regional director, Mr. Favrot, very wisely refrained from bringing before the meeting any prearranged programme of questions for debate, leaving it to the delegates themselves to introduce such problems as they desired to discuss. As he remarked, "The chief value of these meetings will be to enable the different chapters to get together in an informal way, to know each other better and to help toward the solution of each other's problems"—problems which all architects must face.

Among the topics discussed was competitions. It was the general opinion that competitions are undesirable and a most indirect and wasteful method of selecting an architect; that architects, when question of competition arises, should try to show clients that a competition is inadvisable and urge against it. It developed that competitions are seldom resorted to in Arkansas and therefore do not assume the proportions of a problem. A law in Tennessee requires selection of the architect for all public work by competition, which naturally works badly in unimportant projects, and the law will doubtless be modified. In Alabama the architects suffer some unintentional competition among themselves in respect to fees, and it would appear desirable that an under standing be arrived at on this question. The chief concern of TENNESSEE is to get into closer touch with the national organization. GEORGIA would like to see the general adoption of uniform registration laws by all the States. Touching on this problem Mr. Waid and Mr. Brown of the Executive Committee made interesting and informing talks. Mr. Faville led the discussion on the Architectural Relations Committee's questionnaire and awakened so much interest in this topic that it is to be regretted that it was not introduced earlier in the session.

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The programme of events arranged by the LOUISIANA CHAPTER set aside the two forenoons for business. The rest of the time was devoted to entertainment. Walks through "Frenchtown," a visit to the Newcomb Pottery and to the Tulane School of Architecture, an afternoon boat trip on beautiful Lake Pontchartrain, followed by a Creole dinner on the Jahncke houseboat, "Aunt Dinah" (at which it was proposed to make the chef an honorary member of the Institute), a luncheon in the courtyard of the Paul Morphy house, and an inspection of the port and harbor of New Orleans, all served to give a pleasurable seasoning to the occasion.

The delegates to the conference felt themselves greatly favored in having present at the sessions the entire membership of the Executive Committee of the Institute.

N. C. C.

Architectural Relations

The Committee's Executive Committee so far has held two meetings. Its members have kept in frequent communication with each other, and, practically speaking, everything has been done in conference between them.

It was obvious at the first meeting that distance, time and expense would make it impracticable to hold even one meeting of the whole Committee, and that activity of the Executive Committee must be such as the whole Committee might authorize, the continuance and extension of such authority being always contingent upon the confidence of the Committee being retained.

Pursuing this course, and feeling that all available data should be obtained, the Committee was asked for authority to prepare and circulate a preliminary Questionnaire. This was granted, and at a meeting of the Executive Committee, a letter and a form of Questionnaire to Institute members was prepared. These went to all members on 29 January, and the questions were:

1. What should be the attitude of architects to speculative building and speculative builders?
2. What should be the attitude of architects to so-called group practice, or, as it has been called, "hunting in packs"?
3. Is it right for architects to do business on the reputation of the dead or retired, especially when they lack the inspiration and touch of the vanished hand, and need restraint, as by the voice that is stilled; and what should be the attitude of architects to this business method?
4. Should architects practice on a strictly professional basis, or should they be unprofessional and yield to the embraces of the commercial elements of the building business?
5. Should the Institute base its membership requirements on notable achievement and so become a select society; or should it make character and reasonable competence its standards and become an organization having a majority voice in the profession, and truly representative of it?
6. What should be the attitude of the Institute toward smaller and more local architectural and related and allied organizations?

The responses to this questionnaire now number nearly seven hundred and come from every Chapter, including the Chapter at Large. They range in length from "yes," "no," or other short comment interlined on the questionnaire itself, to many five or more page letters. Their points of view vary over nearly the whole range of possibility, and they contain many valuable suggestions.

These responses, aggregating 400,000 words or more, divided in groups, are now passing from member to member of the Executive Committee preparatory to making the final report.

With this letter and Questionnaire there also went to the Committee members a letter asking whether the Committee would authorize the preparation and circulation of other Questionnaires, and the preparation and submission of the Committee Report, based on the data received in response to the Questionnaires and all light upon the Committee's subjects. This authority has been granted.

To encourage an increased interest and response, a postal was mailed each member as a reminder and a letter to each Committee member, telling him the state of the returns and the standing of his Chapter as to number of responses in relation to number of members. A letter was later mailed to each Chapter Secretary asking that his Chapter devote a portion of a meeting to discussion of the Committee's subjects, and that further individual responses be submitted, leaving the Chapter's formal response as a Chapter to follow its receipt of the Committee Report from the Octagon; and again each Committee member from the Chapter whose proportion of response to members was below the average was notified of the standing of these Chapters. At that time there were 10 Chapters whose percentages were above 37½%, three being above 50%. The average for the whole Institute is just below 25%.

Illuminating responses as to each one of the six items have come from members of small and large practice and from all parts of the country. Breadth of view is the evident habit of many, regardless of practice, in cities or sparsely settled country, the professional problems under consideration being, it seems, of interest to all.

It is hoped that each Committee member will find time to give the Report very careful consideration when it reaches him for action and response, so that as presented to the Convention it may fully represent the Committee view. It is hoped that each Chapter will make its member on the Committee a delegate to the Convention and that he may be able to attend a Committee meeting to be called in Washington the day before the Convention opens.

Industrial Relations

A complete report of the work for the year of the Committee on Industrial Relations is being prepared for submission to the coming Convention. The latest news of the Committee's activities concerns the organization of a Congress of the Building Industry in Denver, as a result of the further efforts of Mr. D. K. Boyd of the Committee. The report of the month is therefore omitted. The Chairman of the Committee has, however, prepared for the JOURNAL a review of Mr. Postgate's book on the Building Trades Unions in England under the title

Would You Join a Union?

If you were a carpenter or a mason would you be a member of a Trades Union? If you hate the very men-

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tion of Unionism you will not be interested in reading what follows. On the other hand, if you have a sneaking notion that you would probably join your fellow workers in some sort of a crafts-union if you were a workman, then this comment on a new English book may interest you.

To begin with, here is a book[1] on a subject as apparently material as the history of the formation of Building Trades Unions in England, and it is a beautifully made book. It is good to look at, well put together and light, despite its almost 500 pages. Indeed, an American book with one-third the number of pages would be heavier. As for the typography, it is a delight to the eye.

The presentation of the subject itself shows an amount of study and investigation on the part of the author that is worthy of all praise. The idea of producing a history of the building trades in England appears to have originated with the Amalgamated Union of Building Trades Workers and eventually the undertaking was put through by the National Federation of Building Trades Operatives. The author, R. W. Postgate, says in his introduction:

"* * * in many ways the building trades have been typical of the British working class as a whole. It is true there is no 'women's labor question' in the building industry but nearly every other problem that has troubled the British worker has also arisen in the building trades. The operative builders were once the vanguard of revolution, the strongest section of the militant unionists ninety years ago. They have been also the most conservative section, fighting for the dominance of the Liberal Party and led by an Under Secretary of State. Craft antagonisms have been let develop to their fullest extent, and have been fought by an industrial unionist movement of the most uncompromising kind. The experiments in self-employment, connected with the Guild, and in constitutionalism, connected with the 'Parliament,' are also best studied in this industry."

The subject of Union organization is treated from the beginnings of early building; mediæval organizations; Free Masons, the first trade clubs, the period of Robert Owen and the development of the early 19th Century guild movement down to and through the effect of the great war on building trade workers, the "Building Parliament," the subsequent Building Guilds and the more recent slump in that venture. These are all considered in the most interesting fashion. The facts are recorded, but recorded in a fashion that makes them most suggestive particularly for an American. The repressions, the combinations of employers to use the law to suppress even justified strikes and the efforts to attack the very existence of the Unions, which have filled our own newspapers in the last five or ten years, are found in English history as long ago as 1830 and 1835. At that time an attempt was made to crush the building trades unions by the enforcement of certain "conspiracy" acts intended to prevent any kind of a combination in the building trades; but only enforced against the workers and never against the employers. Later on we have as late as 1866 the courts refusing to convict a treasurer of a Union for stealing money from the Union because his stealing was done from an association which the law considered to be in restraint of trade and hence not to be protected! To an American it would seem as if we were only now going through the same process that England faced 50 or 75 years ago. We seem to have learned little from that earlier experience.

All of this sounds terribly serious but in reality Mr. Postgate's book is frequently most entertaining. We find, for instance, that the officers of the earlier Unions were paid in ale and beer for their services. Indeed we are shown reproductions of the account books of some of the Unions in which aside from an occasional quire of paper the principal expenses seem to be for drinks, as for instance, in the case of Preston Joiners whose monthly account book of 1807 shows 2 shillings 2 pence for paper and books and 10 shillings 8 pence for ale and other entertainment.

It is hoped that this brief review will help to recommend this book to those architects and builders who recognize that the spirit which prompted the building craftsmen of England more than a century ago to form organizations for their own protection against unjust and rapacious employers is only once removed from the spirit that moves us today to join others of our professions in order to better the standards or improve the quality of the service we render. In the beginning these craftsmen had to fight harder and with more crude weapons for they were fighting against starvation. But under it all, in the worst of the battles, we sense that they were also fighting as we are today to preserve the quality of a precious craftsmanship.

ROBERT D. KOHN, *Chairman.*

[1] *The Builders' History*, by R. W. Postgate. Published for the National Federation of Building Trade Operatives. Labour Publishing Company, Ltd., London.

Public Information

CHICAGO: The *Sunday Herald and Examiner* printed on 10 Feb. a discussion of the development of the steel skeleton as applied to high buildings; on 17 Feb. an illustrated discussion of the new capitol at Lincoln, Neb., designed by Bertram Grosvenor Goodhue. The press is provided with an article each Sunday. The Chapter sends in an excerpt from the Illinois Society of Architects *Monthly Bulletin* criticizing the material supplied by the Institute. The author of this criticism says: "While they will not appeal to all of us alike, it is the effect on the great majority that concerns us." We would point out that we have had enthusiastic response from Chapters everywhere, and these articles have attracted the attention of the public nationally. The fact that leading papers of the United States have published the articles free, although holding that they were of a propagandist nature, is a clear exposition of the opinion of men who gauge what the public considers good reading matter.

ERIE: Has used the suggestion that the articles on Fire Prevention of the NEW YORK CHAPTER contain valuable suggestions for the householder, and they will be published in the local papers. They are also taking up the matter of architectural exhibits.

INDIANA: Is working on an Advisory Committee of the State Building Code Commission. The Indiana Society

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and the Indianapolis Association collaborated in an exhibition, held during February at the John Herron Art Institute in Indianapolis. They feel that an exhibition of this kind is the best type of advertising and offers a fruitful means of reaching the public. Some Chapter members are assisting in the work of the Architects' Small House Service Bureau, which is sponsoring a competition for a bungalow, to be exhibited in April.

MINNESOTA: Is preparing a press campaign, has given a wide distribution of "The Functions of the Architect," and is communicating with the WASHINGTON CHAPTER, with a view to using some of its published matter.

NEW YORK: Urges all other Chapters which can use them to apply to Miss Leila Mechlin, Secretary, American Federation of Arts, The Octagon, Washington, D. C., for the two exhibits of architectural work turned over to the Federation as traveling exhibits on tour through the country. These exhibits are of two kinds: one with a predominance of domestic work and the other with a predominance of smaller public, business and institutional buildings. Both show some of the best work done in and about New York during the past few years.

PITTSBURGH: Has been helping in the February exhibition of the Pittsburgh Architectural Club. The show aroused great interest and was well attended. The Chapter joined with the Pittsburgh Architectural Club and gave a Beaux Arts Ball on 15 February, another manner of keeping the public interested in architecture. The Chapter has joined with the Architectural Club and is backing the reissue of the Pittsburgh *Charette,* an activity which might well be imitated. Such local organs would do an immense amount of good in enlightenment.

ST. PAUL: Has published news in the papers about the activities of the Chapter and its study of Rice Park, between the Post Office and the Public Library. Each member is studying it separately and the best of each design will be incorporated in a final scheme and taken up with the city officials. The Chapter is also running the NEW YORK Fire Prevention series.

SAN FRANCISCO: In collaboration with the Bohemian Club is sponsoring an April exhibition in Architecture and the Allied Arts. Members of the San Francisco Architectural Club are working on display posters for the exhibit. The Chapter has offered cash prizes.

UTAH: Held a February exhibition in conjunction with a traveling exhibition started by the SOUTHERN CALIFORNIA CHAPTER under the supervision of Edwin Bergstrom.

WASHINGTON, D. C.: Is continuing its astonishingly efficient work in the weekly newspaper section, furnishing an article on architecture, a picture of a good house, an article on decoration, and, as Mr. Cunningham puts it, "a photograph of one of the handsome village architects." Their work is syndicated in 20 to 25 other papers throughout the country. Mr. Cunningham has asked all Chapter Secretaries to send in designs of houses from their sections, to make the articles more national in character. We urge each Chapter Chairman or Secretary to cooperate with WASHINGTON in supplying material from his home town.

Expert advice obtained from the Public Information Committee, after careful study of the subject, leads to the conclusion that paid newspaper advertising is not as effective as press items prepared so as to induce the papers to use them as reading matter. Furthermore, paid advertising tends to create the impression among the newspaper advertising managers that a Chapter or the Institute is fair prey, and if this impression once takes hold they obstruct in every possible way the free publication of matter of architectural interest in order to increase their advertising revenue. Therefore, the advisors of the Public Information Committee conclude that paid advertising is not the most advantageous channel for publicity. If a Chapter has sufficient funds, a good press agent would undoubtedly be of the greatest help to the local Committee Chairman. His cost is not large in comparison with results and the experience of some Chapters shows it is well within the limits of the Chapter budget.

JOHN V. VAN PELT, *Chairman.*
126 East 59th St., New York City.

The Development of Washington

Supplementing the report of the committee under the chairmanship of Mr. Horace Peaslee, a part of the Washington Committee of One Hundred, to whose activities we have already made reference in these columns, we append a résumé of the reports of other committees of this body:

Forest and Park Reserves [1]

The plan provided by the marvelous foresight of Washington, Jefferson and L'Enfant embraced only about one-sixth of the present area, bounded by the Potomac and Anacostia rivers and what is now Florida Avenue. It reserved at intersections of avenues and streets a number of square, circular and triangular spaces so conspicuously located in the central portions of the old city that one might deem the Capital well provided with parks.

No park in this plan except the Mall is large enough for athletic fields or recreation purposes, now essential features of a park system. Gradual reclamation of marshes of the Potomac and Anacostia rivers will provide for those who can reach them, but many densely populated stretches of the old city are wholly without playgrounds. Due to excessive cost of improved land and the necessity and opportunities for park extension in the outlying sections it is merely recommended that additional areas for playgrounds be acquired in sections not now supplied, even where buildings must be sacrificed, and that historic Pennsylvania Avenue be given a dignity becoming the capital; that the property on its south side not already in government ownership, from the Treasury to the Botanic Gardens and on the north from 7th Street to the Capitol, be acquired, the unsightly buildings removed, and land not required for government buildings improved by carefully designed park development.

[1] Charles F. Consaul, *chairman*; Stephen Child, Archibald Hopkins, Miss Fannie J. Kibbey, C. F. R. Ogilby, Henry K. Bush-Brown, F. F. Gillen, Arthur C. Moses, Robert C. Howard, Dr. Robt. Scott Lamb, John H. Small, 3rd, Charles C. Glover, Jr., Miss Blanche C. Howlett, F. H. Newell, Ovid M. Butler, Robt. Sterling Yard.

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The L'Enfant plan (1791) provided for almost one hundred years' growth. Since 1890 the city has overleaped the old limits and is growing even more rapidly. The population is now nearly 500,000. Government activities are spreading far outside the old boundary.

The lands acquired for park extension during the history of the city total 2,058 acres, at a cost of $3,589,998.[8]

The Park Commission of 1901—Daniel H. Burnham, Frederick Law Olmsted, Jr., Charles F. McKim and Augustus Saint-Gaudens — recommended in their final report the acquisition of 53 additional tracts within the District for the park system. *Only six have been acquired;* many of the most beautiful and important have *been destroyed.* Several are *in process of destruction.*

Steps urgently needed for park reservations inside the District, all included in the 1901 extension plan, are:

1. Establishing a Fort Boulevard following the hills encircling the city and connecting the Civil War forts. Many of these are still well preserved, with long lines of breastworks still untouched.
2. Widening Piney Branch Parkway from Rock Creek to 16th Street, to preserve the forest to the hill tops, embracing and preserving the Indian quarry.
3. Extending Piney Branch Parkway under and northeast from Tiger Bridge, else the bridge will shortly be rendered useless by complete filling of the east side of the arch, compelling a grade crossing of the heavy traffic of 16th Street.
4. Acquiring Klingle Ford Valley, a natural west entrance to the park.
5. Acquiring the beautiful Patterson Tract of hardwood forest one and one-quarter miles from the Capitol Building, ninety-five feet above it, overlooking the city, rivers and hills beyond.
6. Transforming Anacostia River marshes above Bennings Bridge into a water park and the adjacent Mr. Hamilton into a national arboretum.
7. Acquiring the forest-covered valleys and springs tributary to Rock Creek, to protect it from pollution and preserve the flow of water, already reduced one-half.
8. Acquiring tracts in the outskirts at proper intervals

For proper extension, the park system should acquire cost increased.

These proposals are modest compared with the reservations of other American cities.

For proper extension, the park system should acquire, with co-operation of the governments of Maryland and Virginia:

1. Rock Creek Valley northward from District line practically to its sources, with its feeders and branches, certainly so far as covered with forest.
2. Both banks of the Potomac, Washington to Great Falls, to preserve the forests, the very remarkable natural scenery, and stop defacement by quarry operations, this not to interfere with future developments for water supply and power plant.
3. Development of park boulevards down the Potomac, on the Virginia side to Mt. Vernon, on the Maryland side to Fort Washington, along the bluffs overlooking the river.
4. At least portions of the beautiful Sligo Valley just beyond Takoma.
5. The forest areas just outside the District, near north end of 16th Street, with provision for parkways centering at that point as suggested by James L. Greenleaf, Landscape Architect of the Commission of Fine Arts.
6. Co-operation with Maryland and Baltimore City for two park boulevards to Baltimore, one along Rock Creek Valley to its head waters east of Rockville, thence northeastward, the other from the north terminus of 16th Street, utilizing the forested valleys and tributaries of the Northwest Branch and Paint Branch of the Anacostia River, the Big Patuxent, Little Patuxent, and Middle Patuxent, and the Patapsco Forest Reserve already established.
7. Acquiring several Civil War forts occupying Virginia Heights on the Potomac, overlooking the city and the circle of hills beyond.
8. Development of park boulevards from the Virginia terminus of the proposed Memorial Bridge, one directly to Arlington Cemetery, one up the Potomac, connecting with the Lee Highway and the projected park boulevard to Great Falls, one down the river connecting with the projected riverside boulevard to Mt. Vernon.

There is no existing law providing for extension of the park system; and a bill passed by Congress must authorize acquisition of each particular tract.

During the past fifteen years, many of the outskirts, covered with splendid forest oaks and a variety of other hardwood of inestimable value for parks, have been devastated by axe and steam shovel. In several instances builders have stopped operations to allow further appeal to Congress to acquire the property, and have offered the land at cost. It was impossible to secure action before adjournment; the great oaks and beeches and maples and poplars were slashed down—the parks were lost.

The Committee on Parks and Reservations of the Board of Trade with other local civic organizations, the Commission of Fine Arts, officials of the District, Chief of Engineers, U. S. Army, and Officer in Charge of Public Buildings and Grounds, has prepared a bill to provide permanent, continuous and systematic development of the park, parkway and playground system.

With slight amendments it is adopted and recommended.

The bill (S. 112, H.R. 49) establishes a Commission, including the Secretary of the Treasury; Secretary of War, under whom the Chief of Engineers and the officer in charge of Public Buildings and Grounds have for many years had general charge of the existing parks; Chairmen of the Committees of Public Buildings and Grounds of the Senate and House; and the Engineer Commissioner of the District of Columbia, representing the people who will pay a large part of the cost.

No additional compensation is paid members, all salaried officers. The officer in charge of Public Buildings and Grounds, who is made the executive officer, has now an operating clerical and technical force. Administration expense will be negligible.

The bill authorizes a *regular annual* appropriation, not exceeding one cent for each inhabitant of the United States by the last decennial census; at a maximum, about $1,000,000 per year.

Three-fourths of this shall be paid out of the revenues of the District and the general Treasury funds in the same proportion as other District expenses. Estimating the present annual appropriations for the District at $25,000,000, this provides that practically 3 per cent shall be devoted to extension of the park system, surely not unreasonable. Of this $750,000 per year, $450,000, under the present arrangement for division of the cost, would be paid by taxation in the District.

The remaining $250,000 of the total would be used to acquire lands outside the District and would be entirely paid from the general Treasury funds. The total annual charge on the *Federal funds* therefore would be but $550,000, a trifle over one-half of one per cent for each inhabitant of the United States.

The Committee urges united effort to secure the prompt enactment of this Park Commission Bill. When it becomes law the amount appropriated by Congress each year will determine how rapidly progress can be made.

[8] Other cities, notably Chicago, San Francisco, New York, Cleveland, Boston and Philadelphia, have provided far more completely in this respect than has Washington, which stands lowest in value of park properties of all cities over 300,000. The average value in these other 18 cities was about $22,000,000, while the park property of the National Capital was valued at $5,168,477.

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School Sites and Playgrounds[2]

A unified policy on school sites and playgrounds for municipal and school use is timely because of the extensive park development in prospect and the long postponed school construction, involving acquirement of a number of new sites during the next five years.

Thousands of pupils are denied school facilities for half each day; others must work in wholly unsuitable surroundings.

The Board of Education recommends action toward abolishing stop-gaps such as part time, double shifts, oversize classes, portable and rented school buildings and condemned structures; and provision for assembly halls and gymnasiums in all elementary schools of sixteen rooms or more; purchase of sites in advance to insure securing land to provide not only for extending a building but also suitable play space; and the erection of schoolhouse accommodations as needs are apparent and before real congestion exists.

A survey (1916 to 1921) indicates that the children of Washington have suffered because of an entirely inadequate provision of proper playground activities, probably one element in the high delinquency rate among the children of the District. Recommendations made at the end of the report present, it is believed, a very conservative outline of what should be undertaken at once if the children are to have opportunities at all comparable with those in progressive communities throughout the country.

Much of the new population is in sections where present school and playground facilities are totally inadequate for future needs. Block after block of solid rows of houses leave practically no play space. If no steps are taken, a very few years will see the same deplorable state as in the older parts where no sites are available and where school streets must be used for play areas. This condition must be forestalled. At present only 121 of the 154 District schools have playground facilities, and but 85 provide 30 square feet of space per child, generally conceded the minimum for playground purposes.

This school and playground plan contemplates reorganizing of the elementary schools into two groups, one of centralized 7th and 8th grades, and one of decentralized lower grades as at present.

Playgrounds of at least three different types are demanded. For the smaller children of kindergarten age and younger, to whom school playgrounds are not always accessible nor suitable, such small spaces as can be secured should be provided. Many such, now used though unsupervised, can be equipped at slight expense.

Primary schools offer the most widely distributed and satisfactory playground sites for smaller children up to about 12 years, and with removal of the 7th and 8th grades from existing elementary schools, a uniform playground for children up to 12 should be adopted for every such school. This program would give a reasonably uniform distribution of playground facilities throughout the District and bring them within reach of every home. In older districts, where schools have inadequate playground space, existing and proposed municipal playgrounds for smaller children will answer the same purpose.

For children of 12 to 15 such as will attend the proposed centralized intermediate schools, larger playgrounds are demanded, with adequate space for field sports.

These school sports grounds can be administered as part of the school curriculum, and although not restricted to school children would naturally be supervised by school athletic directors. A lesser number of these fields, but larger and preferably with grandstands, should be provided for the high schools for contests, drills and exercise. Future high school sites should contain adequate space for these long needed facilities. Similar playground facilities are now provided for adults and persons not connected with schools.

Sites for adult facilities may well be concentrated in three or four locations where space is available and convenient. At present there is adequate space in some parks for golf links, tennis courts, baseball diamonds and other sports which require large acreage—and it is hoped that they may be extended as recommended by the sub-committee on parks to meet the needs of the city as it grows. The necessity is well recognized. The recommendations are:

First—Speedy acquisition of school sites, with ample playground space sufficient to provide school accommodations for present and near future needs, and that in planning portions of the District not yet built up, school sites with ample playground space be acquired in advance, thus securing the most suitable sites cheaply.

Second—That for children below school age, additional play spaces be set aside wherever park space is available, and that all such play spaces be equipped with sand boxes, slides and swings.

Third—That for children less than 12 appropriations be made promptly to acquire playgrounds for the 31 primary schools now lacking playgrounds.

Fourth—That for children from 12 to 18 provision be made for ample sports fields in connection with all centralized intermediate and high schools.

Fifth—That appropriations be made for municipal playgrounds and sports fields for children in all sections where not provided by the schools.

Sixth—That in location and selection of land for extensions of the park system, provision be made for athletics and field sports for adults, as well as playgrounds for children of all ages.

[2] Evan H. Tucker, *chairman;* Hon. Dwight F. Davis, A. M. Holcombe, Dr. Frank W. Ballou, Wm. G. Henderson, Miss Grace L. Temple, Mrs. W. DuBois Brookings, Arthur Hellen, Philip L. Walker.

Announcements

The Medal of Honor of the Société des Architectes Diplômés par le Gouvernement, given from time to time to laymen for distinguished service in the advancement of art and architecture, was awarded this year to Mr. Charles Moore, for many years chairman of the National Fine Arts Commission, in Washington, at a dinner given by the Société at the Metropolitan Club, New York, 1 March, at which addresses were made by His Excellency the French Ambassador, M. Jusserand; Mr. Royal Cortissoz, Mr. Moore, Dr. John H. Finley of the New York *Times,* and Mr. Chester H. Aldrich of Delano & Aldrich, president of the American Group.

The medal given by the Société to the school of architecture with the best record of accomplishment for the year was awarded to Yale University School of Fine Arts, on 3 March, at the University, with addresses by Mr. Aldrich, who presented the medal, and President Angell of Yale.

UNDER the auspices of The Institute of International Education, Professor Albert C. Phelps, Cornell University, College of Architecture, will again, as in 1923, act as leader for a group of architectural students in Europe

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next summer. The purpose of these tours is to provide educational travel at a minimum cost and full particulars may be had from The International Institute, 522 Fifth Avenue, New York City.

Jurisdictional Awards

Setting of Bathroom Accessories

[Subject of dispute between the Bricklayers, Masons and Plasterers' International Union and the United Association of Plumbers and Steam Fitters.]

Decision Rendered 14 *November,* 1923.

All bathroom accessories, except those covered by decision rendered 4 December, 1920, placed after finished tile wall surfaces are completed, shall be set by the United Association of Plumbers and Steam Fitters. When anchors for bathroom accessories are built into finished tile wall construction, the setting of same shall be done by the Bricklayers, Masons and Plasterers' International Union; and when any such anchors are placed after finished tile wall surfaces are completed, the work shall be done by the United Association of Plumbers and Steam Fitters.

Setting of Alberene Stone Slabs Used as Drain Boards or Backs in Connection with Sinks

[Subject of dispute between the Bricklayers, Masons and Plasterers' International Union and the United Association of Plumbers and Steam Fitters.]

Decision Rendered 14 *November,* 1923.

In the matter of the controversy between the Bricklayers, Masons and Plasterers' International Union and the United Association of Plumbers and Steam Fitters over the Setting of Alberene Stone Slabs Used as Drain Boards or Backs in Connection with Sinks, it was decided that the Setting of Alberene Stone Slabs Used as Drain Boards or Backs in Connection with Sinks is the work of the United Association of Plumbers and Steam Fitters.

Cement Survey

The Secretary of Commerce has appointed an advisory committee to make a comprehensive survey of the properties and uses of cement and concrete. The Committee will co-operate with the Bureau of Standards and officials of the Department, and consist of John Lyle Harrington, chairman, engineer, Kansas City, Mo.; C. H. Boynton, cement manufacturer, New York, N. Y.; N. Max Dunning, A.I.A., Chicago, Ill.; H. C. Turner, contractor, New York, N. Y.; Charles M. Upham, highway engineer, Raleigh, North Carolina.

Research work is now being carried on by the Bureau of Standards and by various public and private research laboratories and commercial and professional organizations in the properties, characteristics and proper use of cement; in the improvement of methods, equipment and appliances tending toward improved efficiency and economy; the seasonal use of cement, especially in winter weather, important in its relation to continuity of employment of labor and the elimination of "peaks" and "depressions" and the even spread of manufacture and distribution.

It is proposed through the survey to co-relate for the benefit of the industry and the public the results of such scientific and technical activities and to center in and under the direction of the Department of Commerce a thorough and disinterested study of the entire subject.

From Our Book Shelf

Christian Art

Mr. Strzygowski approaches his subject from a purely scientific point of view.[1] There is hardly a page which is not a record of exhaustive and painstaking research and it would therefore be outside the province of an architect reviewing the book for an architectural journal to attempt to give this work its proper place in a purely scientific field. On the other hand, the study of architecture is necessarily a science, and it is not until architecture becomes creative that it is an art.

To all architectural students (and I do not limit these to the college variety) the book should be of great value in spite of rather difficult reading, largely because of the great breadth of the field which is opened to their investigation. While few architects could be expected to have the technical training necessary to follow the author to all of his conclusions, the book is nevertheless as invitation to escape from any preconceived and narrow limitations and to seek the sources of inspiration with a freedom they have not generally exercised.

Mr. Strzygowski has summed up the previous study of the origin of Christian church art as being roughly limited by the history of the Christian Church from the western point of vew; that is to say, lying chiefly between converging lines meeting at Rome and finding the first sources in the catacombs of that city.

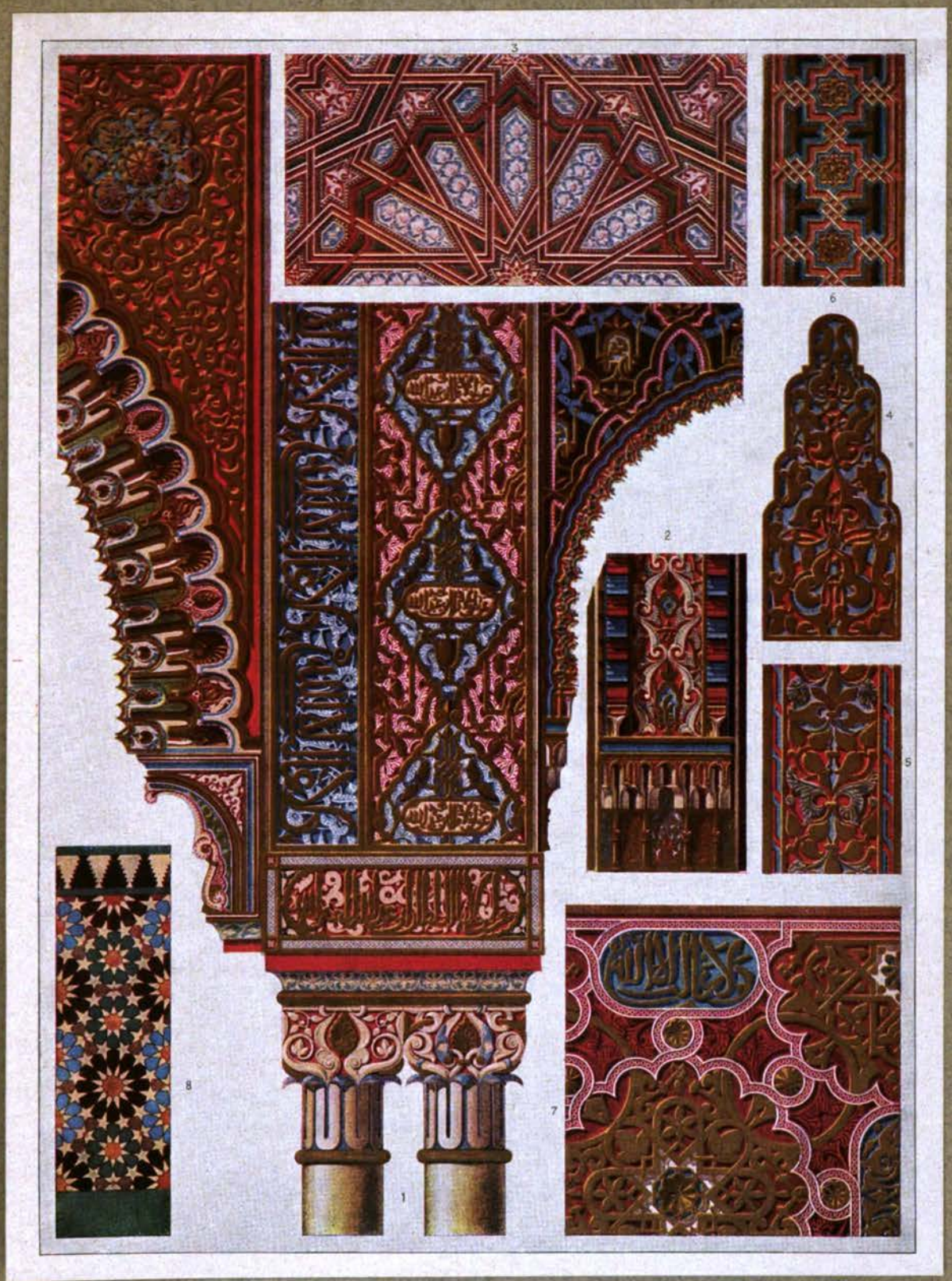
Opposed to this limited survey, the author points out that the Christian faith had its origin in an oriental setting; that it spread freely to the eastward and to the North during the early centuries which marked opposition to it in the West and notably in Rome; that its spread to the East and North covered as great a territory as it ever reached to the West, and that during this period up to the fourth century, while it had little or no opportunity to express itself in Rome, it was expressing itself through the native art forms of the countries where it met no opposition.

From this broad approach the author brings Christian art into the West during the fourth century fully equipped with the domed and barrel-vaulted architecture of the countries which had nourished it, and with their systems of decoration, the most characteristic of which were the rich linings of the interiors. The author points out the characteristic classic building of the earlier period with highly developed façade and the great modification of this type resulting from the vaulted and domed forms coming from the East.

Turning to the West, he uses the church architecture of the British Isles as a further illustration of his contention that Christian church art was built upon the native tradition of the lands which embraced Christianity to a much greater extent than is generally conceded by those who have treated it as a growth following the

[1] *The Origin of Christian Church Art,* by Josef Strzygowski. Translated from the German by O. M. Dalton, M.A., and H. J. Braunholtz, M.A. Oxford University Press, American Branch, New York, 1923.

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THE ALHAMBRA
DETAIL OF ORNAMENTATION
1-5—Lion's Court
6-7—Two Sisters Hall
8—Tile Mosaic Wainscot;
Dressing Room of Lindajara

DEPARTMENT OF ARCHITECTURE
The Pennsylvania State College
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progress of the Church from Rome throughout western Europe.

As an illustration of this contention he uses the marked resemblance between the square tower or keep with buildings clustered around its base and the form taken by the churches and cathedrals of Britain in the later centuries. The author sums this up in the following words:

"Just as there was never a single and uniform Christianity, so from the very first there was never a single stem, far less a single root, from which Christian Art sprang. On the contrary, the time when there was still no uniformity in the Church and still no Christian State was precisely that when the controlling factor was the national spirit, which varied from one people to another."

In a way, Mr. Strzygowski has done for Christian church art what Mr. March Philips has done in another manner in his book on *Form and Color,* and what Mr. Rihbany has done in his book *Wise Men from the East and from the West,* by the suggestion that we can no longer regard the classic and mediæval tradition as two separate and distinct forms of expression hostile to each other, but that through Christian art we discover the intellectual characteristics of the classic tradition merged with the spiritual characteristics of the East. Mr. Strzygowski, however, goes somewhat further and implies the complete overthrow of the original influence of Greece and Rome by the art of the East and the North; the birth of the Renaissance being the logical result of this overthrow and being in Italy the same desire for expression of the national spirit which had influenced mediæval art in other parts of Europe.

In comparatively recent years we have come to appreciate the art of the Far East and of primitive peoples throughout the world. This appreciation has been reflected in our modern art by fresher and more vigorous notes in our modern work. Historic styles are handled with greater freedom and our efforts are less often slavish copies of ancient examples.

Mr. Strzygowski's book is a distinct contribution to this movement in the field of Christian church art and, while disclaiming any qualifications for passing upon its exhaustive scientific content, I can commend it to the student of church art, believing that it cannot fail to open his horizon to a wealth of fresh inspiration.

The book itself is very well presented and were it not for its highly technical character would be a pleasure to read. The type and illustrations invite the reader and it is almost entirely free from the mass of footnotes and quotations from Greek, Latin and French which usually burden a technical work. The argument is frequently marred by undue insistence on the value of the personal views of the author as expressed in previous writings and the very considerable bibliography does not suggest a very catholic field for reference.

M. B. M., Jr.

Furniture

In his Foreword[1] Mr. Tipping says: "When I was young, few wanted to know the origin and date of the chair they sat on or the table they wrote at. Now many do, and quite a body of literature on the subject has arisen. Surrounded by it, and yet merely needing light on some few and simple points, the amateur of old furniture feels like looking for a needle in a bundle of hay. He longs for some small yet compendious volume that will just not omit what he is likely to want to know, and not include a lot which is extraneous and confusing.

"Here he has it. By a careful and intelligent scheme of inclusion and exclusion the author gives the requisite amount and the needed kind of information, presented clearly and agreeably by the apt partnership of letterpress, photographic reproduction, and measured drawing. The reader can readily obtain a correct and comprehensive idea of when furniture, of any leading type, came into use, and of how it was altered in form and detail as time went on. He will also learn what, at various periods, was its substance, and what the mode of its construction.

"All this Mr. Rogers knows about and practices. Moreover, he has shown selective acumen in choosing and marshalling his materials. Thus he has been able to combine terseness with truth, considerable technicality with perfect intelligibility. Many will find his book a helpful companion and a reliable friend."

That in itself is a fair review of the volume. But something may be added. The importance of the many plates of isometric drawings which disclose how the craftsmen of the several periods went to their work—how they put things together—may well be stressed. These plates disclose an unusually intimate knowledge of the subject handled; and they aid one in appraising the art of furniture building as it has taken definite shape out of the material ways and means at hand and under the guidance of various aims comprehended in the day's work of the craftsmen.

Passing the letterpress, the photographs and the drawings in a sweeping review, one gains an insight into the shifting fortunes of the industrial arts over the period in question—the early fifteenth to the early nineteenth century in England. What makes for the changes in form and in design is quite as interesting as the things themselves: to the circumstances attending change the author devotes much space. From the time when English oak logs went through a long process of seasoning—months or years in the water, years in the air—when the material, after it had been fashioned in the rough and mortises and tenons cut to approximate dimensions, was put aside while the work was allowed to take its final "set" before being finally fitted and primed—when little glue was used—one passes to the time when veneering ceased to be a matter of decoration and became a business proposition. From the time when form was a direct outcome of considerations of strength and durability—when ornamentation was subordinate to the structural necessities as conceived by those whose work involved the shaping of materials and the fastening together of pieces of wood—one passes to the time when architects, decorators and executives busied themselves in borrowing exotic forms, trusting to the skill and dexterity of the rapidly disappearing craftsmen to translate their modes into materials as best they could.

[1] *English Furniture. Its Essentials and Characteristics,* by John C. Rogers, A.R.I.B.A., with a foreword by H. Avray Tipping, M.A., F.S.A.

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Which gives rise to speculation. What is to be said of the new forms and designs which came out of the changing order of things—the introduction of the architects, decorators and executives as directing factors? Are the two expressions to be compared and appraised? Perhaps it would be futile to attempt an appraisal as between what the handicraftsmen produced out of their own capacities and what they produced under the guidance of others. But, taken in connection with a wider scope than is afforded by the volume—carrying the review over into the following century, one may conceivably view the introduction of these directing factors as the first signs of decay. It is not that they served as causal factors —they came in to take over the work of supplying what the incoming industrial system was rapidly destroying. Their accomplishment, after all, rested on what could still be turned out by a vanishing group of handicraft workmen.

In popular apprehension, Chippendale, Hepplewhite and Sheraton were craftsmen who produced furniture. "A small quantity of fine furniture can be traced to the Chippendale firm—none with certainty to Thomas Chippendale's own hand. Nothing extant can be assigned to George Hepplewhite or to the firm of A. Hepplewhite & Co., which was formed after his death in 1786. And of 'Sheraton' furniture the same applies, it being even doubtful whether Thomas Sheraton actually 'made' as a practical craftsman after coming to London in 1790."

Of the books on decoration and furnishing published between 1739 and 1816 the author says: "These, with the possible exception of Sheraton's books, are really trade lists, illustrated with designs likely to interest wealthy patrons. They indicate the appreciation of advertisements and the laborious means of carrying it into effect in those days. . . . The perusal of these books leaves the reader rather cold, the numerous line engravings being most uninspiring and many of them are vulgar in their excess of ornament: the perspective is distinctly humorous."

No doubt there are many—perhaps a majority would assign to the work of the later period associated with these well-known names a higher place than to the work of the preceding periods which came from the hands of unknown craftsmen. But however the work of the later period may be rated with reference to what had gone before, it is hardly to be denied that the new industrial process which then took effect held little or nothing in store to fertilize creation. For what has followed since has been a matter of borrowing. F. L. A.

Town Planning

The subjects in the very complete catalogue[1] of the Gothenburg Town Planning Exhibition cover housing, civic centers, public and other buildings, garden cities, town planning, regional planning, industrial developments, waterways, though the principal stress is on the city plan. The scope is international. The name Russia is absent, but Latvia, Finland, Czechoslovakia, Austria, Germany, Norway and Sweden, France, Switzerland, Italy, Spain, Belgium and Holland, China, Japan, the British Empire and the United States are represented.

American plans are summarized and illustrated in the catalogue, and the university groups of America attracted considerable attention abroad. The astonishing number of town plans in European cities is a great contrast to what is done in America. The lack of such a city plan in our big American cities—New York, Philadelphia, Boston, Baltimore—is very evident. There is, of course, a question of how far it is advisable to go when making a city plan in detail, but the example of foreign cities would indicate chiefly that it is advisable to go into detail. The success of the English edition of the catalogue is largely due to Mr. Werner Hegemann, well known in America, where he practiced in Milwaukee, and also on account of his monumental work on Civic Art, published in New York under the name of the "American Vitruvius."

The Housing and Town-planning Act was passed in 1909 in Great Britain, and it is interesting to note that under the recent amendments, all towns of over 20,000 inhabitants are required to have a town plan, and the ministry of health may require plans for places of smaller size. Many civic surveys have been prepared. Regional plans have been developed through the agency of joint committees made up from towns interested, five or ten in number, though in the Manchester region seventy-three are represented. In all, there are about 200 town plans in Great Britain.

Denmark has a classification: "Old towns that grew without a plan"—something like Topsy, who "just growed." Then "Towns laid out on preconceived plans," e.g., Helsingfors, 1658. There are many plans of Copenhagen, including an interesting and perhaps practical saw-tooth harbor plan; also garden villages, parks, "cemeteries," athletic grounds, developments of a church surrounding, and of a railway station site; types of buildings, row-houses, municipal housing, commercial building.

Helsingfors is a great surprise to most Americans. It had a plan in 1817. Most of the other early Finnish towns had been destroyed by fire, and were rebuilt on a dreary gridiron plan with wide streets, all with no attention to appearance. The plan of Greater Helsingfors, by Eliel Saarinen, covers five times the area of the plan of 100 years before.

Amsterdam and about twenty other towns have commissions to give advice either to the builders, or to the authorities who have the privilege of refusing permits if plans are not likely to ensure beautiful buildings. Permission for demolition of historical or characteristic buildings indicative of the early life of the city or essential to well-known points of view may be put into the hands of these commissions, as the Dutch, unlike France, have no law for the preservation of "Monuments Historiques." The city governments have the power to prohibit advertising if objectionable in appearance and there are some county restrictions to prevent marring the landscape by advertisements.

One hundred and twelve pages cover the history of city planning and present architectural conditions in

[1] Catalogue of The International Cities and Town Planning Exhibition, Gothenburg, Sweden, 1923; 390 pp.; 6¾ x 9½; fully illustrated.

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Sweden: The Origin and Development of Swedish Towns. Industrial Settlements. Towns built up by steam and electricity. Town planning in Sweden after 1850—the period of the first railway, steam navigation and harbor development. The 1874 building law includes directions for town plans, revised in 1907. In Stockholm itself was a new architectural note. Such buildings as the City Hall at Stockholm came as a great surprise. A good criticism is that buildings that cost four millions should not be used for novel or untried effects, but a delightful mediæval character in a good modern building without the use of hackneyed details is certainly to be commended.

The United States section includes reports and plans from New York, Boston, the port of Philadelphia, Indianapolis, St. Paul, Pittsburg, Portland (Ore.); groups of college campuses, civic centers, world's fairs.

The English edition of this very remarkable town planning catalogue is a well-printed volume of 390 pages with about that number of illustrations of plans and photographs collected from all around the world.

FRANK A. BOURNE.

A City Planning Manual

City planning, regional planning and zoning are but methods of bringing order out of the physical chaos that results from the haphazard building of individual units in populous areas. The logical orderly and rhythmical arrangement of buildings is the work of the architect, and as buildings are the chief physical characteristics of populous areas, the architect must be called upon sooner or later to act as guide in providing plans for aggregates of buildings and remodeling those aggregates that have been badly started. More than that, as a broadly trained and public spirited citizen, he should become a leader in the bringing of this order out of chaos.

In a way both remarkably concise and remarkably clear Miss Kimball has brought together in her "Manual"[1] information extremely valuable to the city planner, whether he be one whose interest is but newly aroused, or whether he be one whose shelves are crowded with volumes and the innumerable reports which have been appearing so rapidly in the last decade.

From her long experience as Librarian of the Schools of Landscape Architecture of Harvard and Honorary Librarian of the American City Planning Institute (for which she compiled at one time a smaller bibliography) Miss Kimball has had ample opportunity to know what are the questions which confront the would-be city planner and the best books and material to which he should be referred. "The first part of this book," says the preface, "is directed more especially to those just beginning their studies in this field." It is a brief statement of what city planning and zoning are, with lists of books—the best ten, and the best twenty-five to read, and the best magazines on the subject; organizations that are backing city plan movements; lists of city plan reports and municipal appropriations; suggestions on conducting publicity campaigns with lists of lantern slides and films available.

The second part of the book is taken up with an extensive bibliography of 115 pages arranged under such heads as "History," "Laws and Court Decisions," "Civic Surveys," "Channels of Transportation," and so on. At the end of this is an "Index to the Bibliography" with more subjects indicated. New subjects, such as areal maps, are given especial attention.

With this book in hand one need not consult the librarian of a public library, nor yet hunt for hours among the treatises and reports on one's own shelves for references on any given topic of city planning. The volume has no illustrations to catch the eye of the tired business man.

It is a reference work for the student and the practical architect. It is up to date; it is comprehensive, though not bulky; it is scholarly and yet practical.

GEORGE H. GRAY.

[1] *Manual of Information on City Planning and Zoning, including References on Regional, Rural, and National Planning*, by Theodora Kimball, Librarian, School of Landscape Architecture, Harvard University Honorary Librarian, American City Planning Institute Associate, British Town Planning Institute. Harvard University Press.

New Members Elected

Albert E. Ferran, Jean Jacques Haffner, *Cambridge,* BOSTON; Frederick C. Backus, BUFFALO; Thomas E. O'Donnell, *Urbana,* CENTRAL ILLINOIS; John S. Small, *Evanston;* Wallace Franklin Yerkes, Hubbard Woods, Pierre Blouke, Charles Bohasseck, Frank A. Childs, Frank Garrison Dillard, Clarence W. Farrier, Frederick Hodgdon, Joseph Bernard Lindquist, Philip Brooks Maher, Louis E. Ritter, CHICAGO; Joseph A. Garvin, F. W. Ireland, Jr., Roland W. Linder, Oscar G. Stromquist, DENVER; Herbert Baumer, COLUMBUS; Harold Heath Davis, *East Haven,* CONNECTICUT; Clarence E. Shepard, KANSAS CITY; Albert F. Klein, *Ashland,* KENTUCKY; William Duncan Cuthbert, *Ann Arbor;* Frank Henry Wright, *Flint;* Leo M. Bauer, Joseph Ivan Dise, Clair William Ditchy, *Detroit,* MICHIGAN; Chester B. Price, NEW YORK; A. L. Beneker, *Raleigh,* NORTH CAROLINA; Francis A. Berner, Paul W. Irwin, Herbert Meredith McCullough, William Richard Perry, James P. Piper, Hyman Louis Rubin, P. Howard Sterling, PITTSBURGH; Earle B. Bertz, SAN FRANCISCO; Carlton Brush, *Nashville,* TENNESSEE; N. E. Weidemann, *Beaumont;* Bardford Hardie, Jr., *El Paso,* TEXAS; Robert Leon Albert, Norris Ingersoll Crandall, WASHINGTON, D. C.

Letters to the Editor

TO THE EDITOR OF THE JOURNAL:

In response to a request to the Structural Service Committee of the Institute for information concerning waterproofing compounds and processes, I am given an abstract which appears in this number of the JOURNAL.

This abstract is a most illuminating document, not only with respect to the value of several materials and processes used for waterproofing; it sheds light on the effect of salesmanship upon the industrial processes of building. One gathers from this abstract that but a few of the commonly

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employed processes of waterproofing amount to any more than a ceremonial—it has the same effect upon a structure as the laying of a cornerstone or the dedication of the building. That is to say, some of the processes of waterproofing are traceless in their effect.

If such be the case, of course, it is well that we should be advised of it. For with the present cost of building imposing upon us and our clients, the elimination of much that makes for adequacy and durability, it becomes all the more important to know what is of dubious value or utterly useless. So this abstract may be carefully studied; it will well repay the effort.

A word also may be allowed concerning the significance of this study of the value of these compounds and processes. That so many of them should appear to be of no more value than the Bureau of Standards report indicates, that some of them should appear to be of no value whatsoever—all this points to the pertinence of some recent observations as to the needs of "debunking" the building industry.

"Debunking" is a new term and will be variously defined. Some will hold that "debunking" means clearing the decks of ignorance, petty concealments, deceit and fraud. This may be a good and accurate definition of "debunking." But "debunking," in the light of this abstract, may be viewed as a more difficult problem than clearing away qualities of human endeavor, difficult as that would be. Building is no longer the simple industrial process that it once was. It is primarily a matter of selling. And it is the activity of selling that accounts primarily for the scores of "alternate" or "substitute" materials and processes with which we have to deal. It is the activity of selling that accounts for the use of useless material in the first place, and it is alone the activity of selling that accounts for the continued use of a perfectly useless material. If we take the matter of "debunking" seriously, surely the first step is so to organize that decision with respect to the use of a material or a process will rest solely upon adequate scientific tests and not upon the glib talk of salesmen.

FREDERICK L. ACKERMAN.

Obituary

Pierre L. Le Brun

Elected to the Institute in 1874
Elected to Fellowship in 1883
Died at New York City, 14 February, 1924

The New York Chapter of the American Institute of Architecture records the death of Pierre L. LeBrun with this tribute prepared by Mr. Julian Clarence Levi.

The simple facts of his life recorded in the archives of the New York Chapter epitomize to his friends and associates his sterling qualities. Son and brother of an architect, his entire manhood was given to the practice of that profession and to its advancement as an art. In partnership with his father, Napoleon, and his brother Michel, he contributed many notable buildings to the growth of New York City. The completion of the Metropolitan Life Tower in 1910, marking the close of a long and honorable career, became the occasion of the award of the New York Chapter Medal of Honor to the brothers Pierre and Michel.

Mr. LeBrun's interests, however, were not limited to his practice. He was alive to the necessity of enabling the American architect to obtain a proper education. His extensive travels abroad aroused his sympathy for those, less fortunate than he, who were unable to see the monuments of European civilization. To mitigate this condition he formed the Willard Collection of Architectural Casts in the Metropolitan Museum of Art, and later followed it by the gift of the Pierre L. LeBrun Library to that Museum. A similar gift to the Montclair Art Association established an Art Library in its Museum.

So did he labor to enable young America to learn of the beauties of the past, but still he remained unsatisfied for the inpiration of direct contact was lacking. After mature deliberation and careful study he achieved this end in the establishment of the Traveling Scholarship in 1910. The wisdom of his decision and its real value to the profession of architecture has been amply proved by the distinguished records of the LeBrun scholars.

His earthly labor are ended, but yet his work will go on. The kindly gentle spirit has flown, but its influence remains to help mould future generations. His fellows in the New York Chapter wish to record their respect for him as an architect, their affection for him as a man and their gratitude to him for the honor he bestowed upon their profession.

D. EVERETT WAID, *President.*
HOBART B. UPJOHN, *Secretary.*

Henry William Hill, F.A.I.A.

Elected to Associate Membership in 1884
Elected to Fellowship in 1887
Died 16 January, 1924

Henry William Hill, who practiced architecture in Chicago for thirty-nine years, died in Hamburg, Germany, 16 January, 1924, following an operation for appendicitis.

Mr. Hill was born in Elmshorn, Holstein, Germany, 29 January, 1852. After completing his studies at the Polytechnic School in Hamburg he came to Chicago in 1872, working for different architects until 1875, when he became the partner of James J. Egan, practicing as Egan & Hill, Architects. In 1881 he joined Augustus Bauer under the firm name of Bauer & Hill. When Mr. Bauer retired in 1894, Mr. Hill associated with himself Arthur Woltersdorf, which association continued in practice as Hill and Woltersdorf up to Mr. Hill's retirement 1 August, 1914. Immediately after his retirement he took up his residence in his birthplace, Elmshorn. Mr. Hill had not been in this country since his retirement. He was honorary member of the Chicago Chapter, A.I.A., and of the Illinois Society of Architects.

ARTHUR WOLTERSDORF.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL *jointly to give in this division, each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus accord architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

Exposure Tests on Colorless Waterproofing Materials (7b21) (*Based on or Abstracted from Technologic Paper of the Bureau of Standards No. 248. By D. W. Kessler. Pages 33. Size 7" x 10" illustrated.*) Investigation was started about 2½ years ago and a preliminary report was issued at the end of a 6-month period, an abstract of which appeared in the November 1921 JOURNAL. The present report is a continuation of the work over a period of about 2 years, with additional tests started at a later date.

Treatments, applied in accordance with the producers' directions, in most cases consisted of 2 coats of material applied with a brush at 24-hour intervals. Specimens were weather exposed on a roof. In longer period tests there are a few duplications of the same material on different stones, showing that different treatments do not act with an equal degree of effectiveness on different textures; this led to a rather extensive series of tests on stones of varying texture, which, including tests of all waterproofing materials on three Ohio sandstones, has extended over a period of 6 months.

Description of Stones Used in the Tests. Samples of limestone were all from around Bedford and Bloomington, Ind. (the well-known oolithic limestones.) Textures are classified as "fine," "medium," and "coarse." The sandstones gave a somewhat wider range in textures than the limestones, the fine grained stones being considerably finer in texture than the "fine" limestones.

Description of Waterproofing Materials. Treatments consisted of 20 proprietary materials, 1 proprietary process and 2 nonproprietary processes. Proprietary materials were submitted by the producers; the others were made up in the laboratory. **For the latter tests a new set of proprietary samples were requested; and, when analyzed, some were found to differ considerably in composition from those of the same name in the first set.[1] In one case a material had been taken over by another firm and changed in name and composition.[2]**

Materials are referred to by reference letters: A, B, C, etc. In the second set of samples the materials are referred to as A′, B′, C′, etc., in which A′ is to the same trade name as A, B′ the same as B, and so on.[3]

Groups of Materials.—For convenience, materials have been divided into 5 groups, according to composition. (See following column.)

[1] For examples of radical changes, see F, F′ and K, K′; of material changes, see I, I′ and D, D′; of slight changes, see M, M′, S, S′ L, L′ and J, J′.—*Ed.*

[2] Probably Aquabar and Cresolac.—*Ed.*

[3] In some cases further information can be furnished by the Scientific Research Department of the A. I. A.—*Ed.*

Trade Names and Producers of Materials

Lithol. Arabol Manufacturing Co.
Minwax. The Minwax Co.
Clear Driwal. The Billings Chapin Co.
G. F. 100. General Fireproofing Co.
G. F. 145. General Fireproofing Co.
Ceresitol. The Ceresit Waterproofing Co.
{Aquabar No. 2. The Aquabar Co.
{Cresolac. Crescent Sales & Mfg. Co.
Kemisol. Morene Products Co.
Dehydratine No. 2. A. C. Horn Co.
Dehydratine No. 22. A. C. Horn Co.
Dehydratine No. 222. A. C. Horn Co.
Colorless Waterproofing. Northwestern Waterproofing Co.
Glidden's Colorless Waterproofing. Glidden Varnish Co.
Anhydrosol. Toch Bros.
Toxloxpore. Toch Bros.
Reduced 1017. Toch Bros.
Caffall's Process. Obelisk Waterproofing Co.
Porseal. The Truscon Laboratories.
Sylvester's Process. Non-proprietary.
Paraffin in Gasoline. Non-proprietary.
Gar-Kem. Gardner-Barada Chemical Co.
Pyramid. Pyramid Chemical Co.

Composition of Materials.—Because of their nature, chemical analyses may not indicate the exact proportions originally used. Hence, results are in round numbers and are merely to show the general nature of materials and serve as a basis of classification.

Several are not very stable even in the containers. All must be kept airtight. Even when sealed in containers, a considerable number of the treatments tend to separate after a few months; this is especially true of those which carry fatty substances, and aluminum soap in solution. Those having only paraffin in solution appear to be most stable among the organic compounds. Water solutions are fairly stable, except those containing glue, which decomposed in some cases.

Materials in Groups 1 and 2, especially those containing a large percentage of nonvolatile matter in solution, become very thick and even solid in cold weather. Damp surfaces will not absorb treatment properly, hence they should be applied during dry weather.

Group 1.—Petroleum distillate (including paraffin), fatty substances, and mixtures of the two dissolved in mineral spirits. Petroleum distillates consist of paraffin or similar fractions; the mineral spirits are the light distillates of petroleum. A fatty substance frequently found in them is china wood oil. When applied to stone they penetrate into the pores, and as the light volatile solvents evaporate a considerable portion of the waxy or fatty substances held in solution is deposited there, constituting the waterproofing element.

Material M:

Color	Clear, slightly yellow
Odor	Mineral spirits
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	86 per cent
Character	Mainly mineral spirits
Nonvolatile (24 hours at 105° C.)	14 per cent
Character	Paraffin

Material M′:

Color	Clear, water white
Odor	Mineral Spirits
Consistency	Very thin liquid
Volatile (24 hours at 105° C.)	88 per cent
Character	Mineral spirits
Nonvolatile (24 hours at 105° C.)	12 per cent
Character	Chiefly paraffin

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Material S:

Color	Cloudy
Odor	Mineral spirits
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	93 per cent
Character	Mainly mineral spirits
Nonvolatile (24 hours at 105° C.)	7 per cent
Character	Paraffin

Material S':

Color	Water White
Odor	Mineral spirits
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	85 per cent
Character	Mineral spirits
Nonvolatile (24 hours at 105° C.)	15 per cent
Character	Paraffin

Material U:

Made up in laboratory. Approximately 10 per cent solution of paraffin in gasoline.

Material B:

Color	Clear yellow
Odor	Mineral spirits
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	67 per cent
Character	Mineral spirits
Nonvolatile (24 hours at 105° C.)	33 per cent
Character	China wood oil and paraffin

Material B':

Color	Clear yellow
Odor	Mineral spirits
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	67 per cent
Character	Mineral spirits
Nonvolatile (24 hours at 105° C.)	33 per cent
Character	China wood oil and paraffin

Material I:

Color	Light amber
Odor	Mineral spirits
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	62 per cent
Character	Petroleum distillate
Nonvolatile (24 hours at 105° C.)	38 per cent
Character	Fatty oil and paraffin

Material I':

Color	Dark yellow
Odor	China wood oil
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	26 per cent
Character	Petroleum distillate
Nonvolatile (24 hours at 105° C.)	74 per cent
Character	China wood oil and paraffin

Material D:

Color	Light yellow
Odor	China wood oil
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	90 per cent
Character	Mineral spirits
Nonvolatile (24 hours at 105° C.)	10 per cent
Character	China wood oil and paraffin

Material D':

Color	Dark yellow, cloudy
Odor	Mineral spirits
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	24 per cent
Character	Mineral spirits
Nonvolatile (24 hours at 105° C.)	76 per cent
Character	China wood oil and paraffin

Group 2.—**Aluminum soap or mixture thereof with heavy petroleum distillates, fatty or resinous substances dissolved in mineral spirits, coal-tar naphtha, or turpentine. They act similarly to those in Group 1.**

Material C:

Color	Cloudy brown
Odor	Varnish like
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	96 per cent
Character	Mainly mineral spirits
Nonvolatile (24 hours at 105° C.)	4 per cent
Ash	13 perc ent
Character	Aluminum soap

Material C':

Odor	Turpentine
Color	Cloudy yellow
Consistency	Thin syrupy liquid
Volatile (24 hours at 105° C.)	96 per cent
Character	Turpentine mineral spirits
Nonvolatile (24 hours at 105° C.)	4 per cent
Ash (aluminum oxide)	18 per cent
Character	Aluminum soap

Material F':

Color	Cloudy, dirty yellow
Odor	Benzol
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	97 per cent
Character	Mainly mineral spirits
Nonvolatile (24 hours at 105° C.)	3 per cent
Ash (aluminum oxide)	6.4 per cent
Character	Aluminum soap and waxy material

Material K':

Color	Milky
Odor	Coal-tar distillate
Consistency	a viscous liquid which separates on standing
Volatile (24 hours at 105° C.)	71 per cent
Character	Chiefly coal tar distillate
Nonvolatile (24 hours at 105° C.)	29 per cent
Ash (aluminum oxide)	7.2 per cent
Character	Fatty oil and aluminum soap

Material L:

Color	Dark brown
Odor	Petroleum distillate
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	93 per cent
Character	Petroleum distillate
Nonvolatile (24 hours at 105° C.)	7 per cent
Rosin test	Positive
Ash (aluminum oxide)	6.4 per cent
Character	Mainly aluminum soap

Material L':

Color	Clear dark yellow
Odor	Petroleum distillate
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	88 per cent
Character	Petroleum distillate
Nonvolatile (24 hours at 105° C.)	12 per cent
Ash (aluminum oxide)	2.4 per cent
Character	Aluminum soap and heavy mineral oil

Material V:

Color	Pale yellow
Odor	Turpentine
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	95 per cent
Character	Turpentine and petroleum distillate
Nonvolatile (24 hours at 105° C.)	5 per cent
Rosin test	Positive
Ash (aluminum test)	9.1 per cent
Character	Mainly aluminum soap

Group 3.—**Resinous materials and mixtures of same with fatty oils dissolved in mineral spirits or coal-tar naphtha. These penetrate pores to a slight extent and usually deposit a thin film on surface. They are really light varnishes.**

Material K:

Color	Yellowish brown
Odor	Coal-tar distillate
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	62 per cent
Character	Coal-tar naphtha
Nonvolatile (24 hours at 105° C.)	38 per cent
Character	Coal-tar resin

Material O:

Color	Clear dark amber
Odor	Varnish
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	61 per cent
Character	Mainly mineral spirits
Nonvolatile (24 hours at 105° C.)	39 per cent
Character	Oils and resins
Rosin test	Positive

Material P:

Color	Clear dark amber
Odor	Varnish
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	62 per cent
Character	Mainly mineral spirits
Nonvolatile (24 hours at 105° C.)	38 per cent
Character	Oils and resins
Rosin test	Positive

Material Q:

Color	Clear dark yellow
Odor	Varnish
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	68 per cent
Character	Mainly mineral spirits
Nonvolatile (24 hours at 105° C.)	32 per cent
Character	Oils and resins
Rosin test	Positive

Group 4.—**Water solutions of various substances claimed to react chemically with some element in the stone and**

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form pore-filling substances, consisting of inorganic salts, glue, and soluble soaps.

Material E:
A 15 per cent aqueous solution of magnesium fluosilicate.

Material F:

Color	Milky
Odor	Ammonia
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	97 per cent
Character	Water and ammonia
Nonvolatile (24 hours at 105° C.)	3 per cent
Fatty matter	94.7 per cent
Ash (mainly sodium carbonate)	5.3 per cent
Character	Sodium-ammonia soap

Material H:

Color	Milky white
Odor	Glue
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	94 per cent
Character	Water
Nonvolatile (24 hours at 105° C.)	6 per cent
Character	Mainly glue

Material H':

Color	Milky White
Odor	Glue
Consistency	Thin liquid
Volatile (24 hours at 105° C.)	97 per cent
Character	Water
Nonvolatile (24 hours at 105° C.)	3 per cent
Ash (aluminum oxide)	11 per cent
Character	Glue, waxy material, and aluminum soap

Material W:

Color	Milky wbite
Odor	Rancid fat
Consistency	Thin liquid
Volatile at 105° C	95 per cent
Character	Water
Nonvolatile	5 per cent
Character,	Glue with a small amount of aluminum soap and borax

Group 5.—Two aqueous solutions applied as individual treatments and reacting chemically with each other precipitating an insoluble substance in the pores. A typical example is a solution of alum, followed by a solution of soft soap, resulting in formation of an insoluble soap. (Sylvester's process.) Other treatments of this nature were tried in a preliminary way, but results were not promising, and were not included in the exposure tests.

Material T:
This is a non-proprietary process known as Sylvester's process. The materials consist of 2 ounces of alum dissolved in 1 gallon of water for the first application, and 12 ounces of soft soap dissolved in 1 gallon of water for the second coat. The reaction results in the formation of an aluminum soap.

Miscellaneous.—Two treatments do not fall under any above classification and are described separately. Treatment J is solution of cellulose nitrate in solvent similar to fusel oil, of a syrupy nature. It does not penetrate the pores appreciably, but leaves a thin film on surface. The other is the molten-paraffin process mentioned above. (See tests, Group 1.) It attains same object as some of those in Group 1 which carry paraffin into pores in solution to remain after solvents evaporate.

Material J:

Color	Clear yellow
Odor	Fusel oil
Consistency	Syrupy liquid
Volatile (24 hours at 105° C.)	93 per cent
Character	Ethyl acetate, acetone, etc.
Nonvolatile (24 hours at 105° C.)	7 per cent
Character	Mainly cellulose nitrate

Material J':

Color	Cloudy yellow
Odor	Amyl acetate
Consistency	Sirupy liquid
Volatile (24 hours at 105° C.)	90 per cent
Character	Amyl acetate and fusel oil
Nonvolatile (24 hours at 105° C.)	10 per cent
Character	Mainly cellulose nitrate

Material R:
A process rather than a material. The material used in treating the specimens was ordinary "parowax."

Results of Tests on Long-Period Exposures indicate only a few treatments were effective in preventing water absorption over several months' exposure. The few cases, however, where treatments were effective over a 2-year period seem to indicate a practical stone preservative is possible. Five proprietary materials showed little or no signs of deterioration, as far as absorption values are concerned, during those tests.

All specimens showed gradual loss in weight over entire period, not due entirely to evaporation or decomposition of treatment. In several instances waterproofing material was functioning as well at end of 20 months or longer as at start, indicating that even materials having high waterproofing values do not prevent surface solution on carbonate stones.

Results, Group 1 Materials. These also include process R, miscellaneous group.) Materials having paraffin for solid matter, entirely or in part, have shown highest waterproofing values and least deterioration, but were less effective during first months of exposure than later.

Those having mixture of paraffin and fatty oil (B and I) gave excellent results on Indiana limestone. Those having all paraffin for solid matter (M, S, U, R) gave highly satisfactory results in most cases, except for a few instances of minor relapse in the early part of test. M showed rather high absorption after 4 months exposure but thereafter no appreciable absorption was noted. Between 3 and 7 months, U permitted considerable absorption during immersion tests. After that it gave very satisfactory results.

Treatment R, entirely of paraffin with no solvent, is applied hot, and is a proprietary *process.* The only long-period test was on fine grained sandstone from New Mexico. It was not satisfactory, but should not be considered entirely fair, because the stone was greatly weakened by previous weathering. Later tests gave excellent results.

Those materials having fatty oil alone, or in large part, gave satisfactory results over several months but at the end of a year or less began to show signs of decay. For example, material A, after passing a period of almost worthlessness between 12 and 20 months, seems to have improved somewhat; D shows similar condition, but improvement at end of period is very slight.

Material G, a petroleum grease dissolved in mineral spirits, gave results very similar to these, but absorption was considerably less and treatment seems more durable.

Results, Group 2 Materials. During greater part of test these gave good results. Only materials C and L, however, are under test for over 8 months; C shows considerable deterioration at the end of 20 months; L shows less.

Results, Group 3 Materials. None gave satisfactory results. Materials P, Q, K show very high absorption values during cold months with slight decrease during summer.

Results, Group 4 Materials, have shown even less value than Group 3. Tests indicate that those supposed to react with the stone do it so feebly as to have practically no value in sealing pores. Those intended as water repellants have given no great reduction in absorption and have only temporary value.

Two materials in this group have been given considerable attention in these tests, as they have been marketed to a considerable extent and the producers claim numerous successful cases of use.

Four series of tests were made with H, none indicating any appreciable value after 6 months' exposure. A series of tests with E does not indicate even temporary waterproofing value.

Results Group 5 Materials. Gave unsatisfactory results in all tests.

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FIG. 1.—Photograph showing appearance of the waterproofing materials on limestone before exposure to the weather. The right-hand half of each slab is waterproofed.

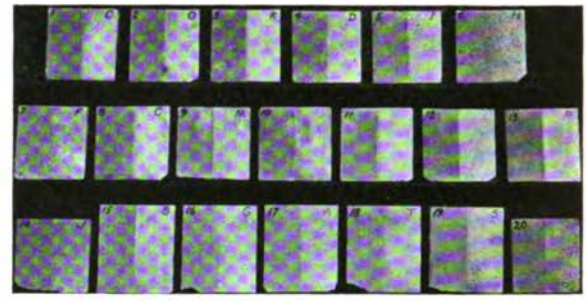


FIG. 2.—Photograph of the same slabs shown in Figure 1 after 18 months' exposure to the weather. The right-hand half of each slab is waterproofed.

Results, Miscellaneous Group. J gave even less satisfactory results than Group 5. The film which it forms on stone's surface soon became perforated and later peeled off.

Treatment R was described in connection with Group 1.

Results of Tests on Various Textures of Sandstone. Sixteen waterproofing materials were tested on each of 3 textures of stone during 6-month exposure. A′, B′, C′, and I′ were effective on coarse and medium texture stone, but allowed considerable absorption in the fine texture. To slight extent this was true with L′ and R′.

Materials M′ and S′ showed the reverse. However, this is not very pronounced and the values do not show a gradual decline, but are lowest on the medium texture.

On dense stones best results were obtained with materials D′, F′, M′, R and S′; on medium texture with B′, C′, I′, M′, R and S′; and on coarse texture with B′, D′, I′ and R. The highest waterproofing values on all stones were recorded by R.

Appearance of Treatments on Limestone. Effect of treatments on appearance of limestone has been determined by treating half one face of a slab of stone with a waterproofing material, leaving the other half in natural state for comparison. Fig. 1 shows the slabs soon after treatments were applied, and Fig. 2 after the slabs had been exposed 18 months. The right-hand half of the slabs is the treated portion, and the letters in the upper right-hand corner refer to the treatments as designated.

It will be noted that all treatments discolored the stone at first. Treatments containing rosin gave the worst appearance and all materials in Group 1 discolored considerably, but these are not permanent (see Fig. 2). Practically all slabs after 18 months appear lighter and cleaner on the treated portion than on untreated portion, due partly to gradual bleaching out of material applied and the fact that waterproofing prevents or reduces adhesion of dust, soot, etc. Original discolorations were noticeable in most cases for 6 months or longer after exposure.

Appearance of the Waterproofing Treatments on the Sandstones. On close-texture, bluish gray sandstone treatments could be said to give discolorations especially objectionable after 6 or 8 months weathering. Some appeared dark and oily at first. Treatments D′, I′, and R still showed slight effect after 6 months; E′ showed a slight yellowish brown stain, J′ showed shiny patches where surface film had not peeled off, and K′ produced an unsightly coat on surface resembling lard or tallow, mostly scaled off after 6 months.

Treatments on medium texture showing oily discolorations after 6 months were B′, D′, I′, M′ and R. Discolorations were considerably worse than on the dense stone, and would probably be considered objectionable in this respect. Treatment E gave a yellowish brown stain to a marked extent, J′ shiny patches, and K′ gave an ugly white coat like tallow, which had only begun to scale at 6 months.

On the open texture B′, D′, I′, M′, R and S′ gave oily discolorations, even more conspicuous than on medium texture; J′ and K′ showed the same appearances noted above, but somewhat more pronounced.

The producers of R have a process of removing the excess wax from the surface which serves to clear up the greasy appearance. Several specimens were submitted to this firm to determine to what extent the cleaning process would remove objectionable discolorations, and all results were remarkably good. If same degree of cleaning is practiced on actual work it could not be regarded as producing a bad appearance on any stones used.

Conclusions. The following conclusions are based upon and confined to the materials investigated:

1. The most effective waterproofing materials in this series are those the waterproofing elements of which are heavy petroleum distillates, fatty oils, or insoluble soaps.

2. Effectiveness of any waterproofing may be greatly influenced by character of pores in the stone.

3. Stones having close textures are more difficult to waterproof than those with large pores.

4. Treatments giving the highest waterproofing values and appearing to be most durable are those using paraffin as the waterproofing element, alone or with other materials. Deterioration or loss of waterproofing value on materials of this type is not appreciable within 2 years.

5. Waterproofing materials employing resinous substances as the waterproofing element are not durable.

6. Materials consisting of aqueous solutions, the purpose of which is to react chemically with the stone or to act merely as water repellants, have only temporary effects.

7. Separate aqueous solutions which react chemically with each other and form insoluble substances in stone pores give low waterproofing values and deteriorate rapidly.

8. In general, materials giving highest waterproofing values produced greatest discolorations, the amount being proportional to porosity of the stones. These decrease on weather exposure and after a year or more, depending upon their intensity, are compensated for by the fact that treatments tend to prevent accumulation of dust and soot on the surface.

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The Villa Mondragone at Frascati

Illustrations by the Author

I.

TO CONTEMPLATE but for a moment any one of the great villas of the Renaissance which dot the hillsides surrounding the Roman Campagna is to bring to mind not only the rise and reign of the "Pope-Kings" and the remarkable development of artistic effort under the Counter-reformation, but the whole course of history back to the seed from which sprang Rome and the Roman people. The Rome which absorbed and made its own the great artists of the Renaissance as easily as it absorbed the barbarian tribes ten centuries before, and the Rome whose indelible influence is written in the massive grandeur of its temples and palaces, and the Rome whose spirit still shapes and moulds artistic thought throughout the western world.

While it is not the purpose here to trace the political, social or artistic history which lies back of each one of the great monuments of Papal Rome, still it must never be forgotten that the concentration of power, of wealth, the love of luxury, pomp and display were but superficial reasons for their existence, and that behind all was the ever-present heritage from Imperial Rome, which caused such a light reckoning of colossal schemes that today one is left not with a feeling of wonder that the schemes were ever conceived or attempted, but a feeling of surprise that they were ever abandoned.

II.

The town of Frascati is situated on the northwestern slopes of the outer crater ring of the Alban hills, about fifteen miles southeast of Rome. The particular spur of the hills against which it is built was crowned by the ancient city of Tusculum. When Tusculum was razed by the Romans, in 1091 A.D., many of the fugitives took refuge in the then thriving but lower-lying town, which seems to have grown upon the site of an extensive Roman villa or number of villas.

But while the town of Frascati did not exist in Imperial Roman days, the name had already been identified with the site as early as the ninth century A.D., when the "Liber Pontificalis" mentions "four churches in Frascata." In the Middle Ages it was a papal town; today its shady ilex walks, sunny squares and delicious wine make it a favorite stopping point of the wayfarer in Italy. About three-fourths of a mile to the east of this pleasant town, upon the road to Monte Porzio, lies the Villa Mondragone.

III.

The villa is superbly situated on the slope of a hill. Fronting the open country on the northwest, it stands out from the hillside in sharp relief, flanked by great bastions and retaining walls which make a group whose well-balanced proportions form an impressive sight from any angle of approach.

On closer inspection it will be seen that there are four well-defined levels artificially formed by cutting the hillside. Upon leaving the Monte Porzio road, at the main gate of the villa grounds, one ascends a gently sloping alley over a third of a mile in length, lined by tall cypress trees, and marking the main axis of the villa scheme.

About 1,600 feet from the main gate the ground rises sharply, and here, at one time, two roads branched, one to the right and one to the left, ascending in wide curves to the lowest of the four main levels of the villa. The central alley was continued to this level in a series of terraces and steps which today have totally disappeared, the steep hillside remaining as an unbroken turf-covered slope. Of the two curving roads, but one remains, that which is on the right as one approaches the villa, while the other can be barely traced through the olive trees.

Arriving at the first level one finds oneself at the foot of the great retaining wall which supports the

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terrace above. The term "level" in this case is a little ambiguous, for in fact the ground slopes sharply downward from east to west, so that the retaining wall is about thirty feet higher at the western corner than at the east.

Symmetrically about the main axis of the villa the wall swings outward in a huge semi-circle, and the point at which it crosses the main axis is marked additionally by a further projection, rectangular in shape. The vertical face of the wall is treated here by a large fountain, formed by three niches placed in an architectural frame composed of rusticated pilasters. This feature, placed as it is, forms the effective stop for the cypress alley.

At the western and lowest part of the terrace occur great vaulted rooms, the walls of which are substructures supporting the terrace above. These rooms were used formerly as the kitchens of the villa. The two necessary chimneys have been made into giant free-standing columns rising from the parapet of the terrace above and forming one of the distinctive features of the villa. In order to balance the composition two others were constructed at the east, but these are purely "dummies." Today, however, none serves its original purpose, as the kitchen fires have cooled and the spits have been taken away, so that where fowls were once dressed and cooked to serve the taste of popes they now live in security.

From this lower level one ascends at either side to the second level which forms the main front terrace of the villa. Today this is one of the most magnificent features of the composition. The long lines of balustraded parapet, marked at the ends by the "Popes' Chimneys" and swinging outward in a wide arc at the center, form the unforgetable foreground of an unforgetable view. In the center of this great terrace stands the "dragon fountain," a great basin, richly moulded, in which stand four dragons supporting in turn three superimposed bowls, the whole composition rising to a height of more than twenty-five feet.

From this terrace rises the villa proper, but upon leaving the northern front the ground again begins to rise so that by the time the southern and entrance portal is reached one stands on the third level of the constructions, and upon entering the great central quadrangle around which the villa is built one is fully thirty feet above the northern terrace.

Against the hillside to the south of the buildings another retaining wall rises, formed as a huge semi-circle, its center marked by a fountain-filled niche which is approximately upon the main axis of the composition. The ground held by this wall forms the fourth and the last of the main levels of the villa, but what was once an upper garden or shady wood is now given over to the raising of vegetables and grapes.

IV.

The architecture of the buildings is somewhat rough and careless, though a great deal of this feeling is given by the incomplete façade upon the west which, unfortunately, is the first seen by the visitor of today. With this unprepossessing exterior in mind, one is hardly prepared for the massive and dignified entrance portal, nor yet, upon entering the great interior quadrangle, for the completeness of the façade which one faces. A fine two-storied loggia of five bays is flanked by two slight tower masses, and the whole contained by advanced wings. The bays of the loggia are composed of superimposed arches, framed on the ground floor by Doric pilasters, and on the upper floor by Ionic. Each series of pilasters supports an unbroken entablature and the metopes of the Doric frieze are filled with eagles strongly carved in the brown tufa masonry. The spandrels of the lower arches are decorated with boldly cut dragons, while those of the upper series have a simple treatment of unadorned medallions.

Passing through the loggia, one enters the main reception hall, which rises through two stories and is now devoid of decoration. On the other side of this room and forming the central feature of the north façade is a second loggia. This is of but three bays and fortunately retains its decoration, in the form of rich arabesques. Both loggie are glazed, bowing to practical needs of today but thereby spoiling to a large extent their effectiveness in the façades.

Placed at either side of the reception hall and loggie are the living rooms of the villa, while the space under them at the level of the northern terrace is now used as the villa chapel. Those rooms immediately adjacent to the entrance loggia consist on the east of a small private chapel and a circular antechamber on the west.

The two wings which frame the main façade toward the entrance court are relatively narrow, and the spaces behind them on the north are taken up by two bastions. The western one surrounds a small court and contains service rooms of the villa, while the one on the east forms an open terrace which is used as a small private garden.

The western wing of the villa is occupied, on the main floor level, by a long gallery now converted into a library, while the southern wing, through which one enters, is composed of service rooms. On the eastern side of the great quadrangle is a smaller oblong enclosure at the end of which, joining the house, is a magnificent portico.

This portico is composed of five arched bays, with rusticated Ionic pilasters between them, which in turn support an unbroken entablature. The arch-rings are supported by smaller Ionic columns and the spandrels are filled with boldly cut dragons and eagles. The whole is executed in the dark brown tufa which is used consistently throughout the villa. Each bay is cross-

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THE VILLA MONDRAGONE
AND ADJACENT VILLAS

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vaulted and is separated from the others by bands of decoration, and the whole vaulted ceiling is covered with decorative stucco. The five divisions of the rear wall are treated alternately with niches and doors, and the end walls are also pierced by doors. As the enclosure, of which the portico forms the north end, is at the same level as the great quadrangle, it is supported by a retaining wall which raises it above the level of the main terrace on the north; consequently the two doors which are let into the walls of the eastern half of the portico open upon slightly projecting balconies, while of the remaining two one leads into the eastern wing of the house and the other affords entrance to the private garden upon the eastern bastion.

The far or southern end of the enclosure is treated as a hemicycle, and within it is a lunette-shaped pool surrounded by balustrading, the whole forming a kind of water-garden. This feature, one of the most striking of the whole villa, is slightly above the level of the enclosure proper and is reached by two stepped ramps. The hemicycle itself is composed of seven arched bays divided by rusticated Ionic pilasters supporting an entablature which, in this case, breaks out over each pilaster. The arches themselves enclose shallow "splays" decorated with stucco and mosaic. The decorations form a pattern in perspective in the evident effort to give a feeling of greater depth to the recesses formed by the arches. The pilasters, entablature and base members are all in the same tufa masonry used in the other features of the villa. The floor of the entire hemicycle was once paved with mosaic, but only a few traces of it remain. The central arch of the group at one time contained a fountain, and numerous smaller jets played into the central pool, but these have ceased to flow, long since, and only a feeble jet from the center of the pool remains to tell the visitor of glories that were. Still, even in its ruin and decay, the hemicycle is a most distinguished piece of work. In comparison to it, the similar features of other villas seem weak or tawdry, and were no comparison possible it would still remain as one of the triumphs of garden architecture.

V.

Standing on the great northern terrace one not only gets a wide-spreading view of the Roman Campagna but, in the foreground, one is able to see most of the property now belonging to Mondragone and thus more easily comprehends the vast scheme conceived in its creation. The cypress alley lies stretched along the main axis of the villa and to the east at its foot lies the Villa Vecchia (formerly called Angelina), the first building to be erected on the site. The gate and the highroad do not stop this axis, but it is continued on the other side through a garden now given over to the cultivation of vegetables, and which occupies the top of a huge bastion-like structure. In all probability this structure was once part of the Roman villa "Quintiliorum." Years afterwards it was used by the Cenci in forming the foundations of their palace, only a few bits of which remain. A little more to the west lies the Villa Borghese, and over its top is seen Frascati. From Mondragone, running down the hill to the Borghese villa, is a long avenue lined by double rows of ilex trees, and in impressiveness second only to the cypress alley. It is the principal remnant of the former attempt to make the two villas into one, and is today the usual manner of approach by visitors.

From the Villa Borghese the road runs on between ilex trees to the town of Frascati, where the boundary of the property is marked by a monumental gate of two pylons, one surmounted by the eagle and the other by the dragon, the emblems of the Borghese family.

Further to the west and higher up on the hillside lies the Villa Falconieri, and above all, under the very summit of the Tusculum hill is the Villa Rufinella. One of its entrance driveways has been placed on axis with a like feature of Mondragone, so direct communication as well as a beautiful vista was secured. Though the line of communication has been broken, the vista still obtains and is easily traceable.

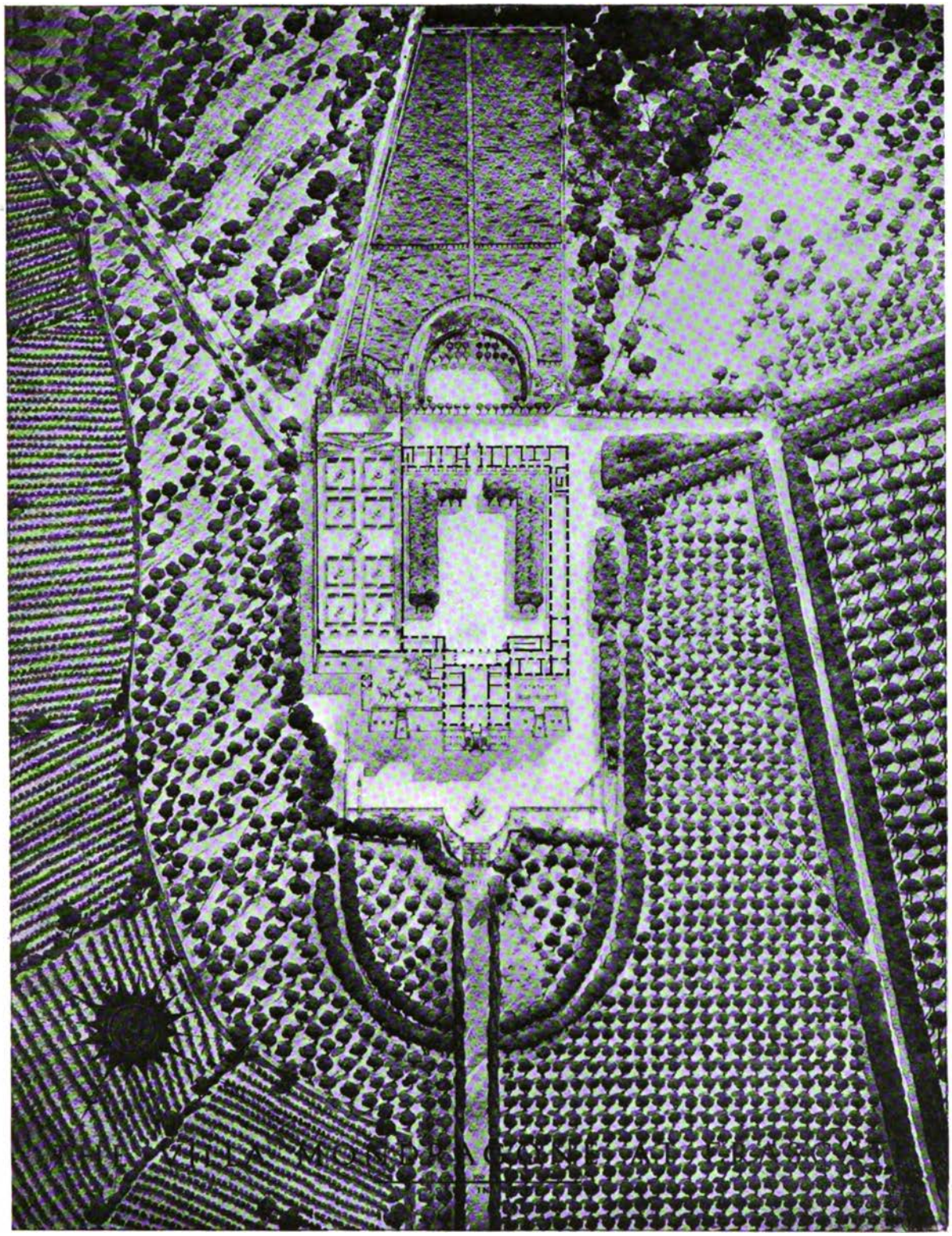
With this brief description of the villa and its surroundings in mind, one can turn with greater understanding to the story of its building.

VI.

The foundations of the Villa Mondragone were laid between the years of 1573 and 1575, by Cardinal Marco Sittico d' Altemps. Cardinal d' Altemps was born at Ems, in the diocese of Costanza. His father was Count Volfango d' Altemps, and his mother Chiara dei Medici. In his youth he was a soldier, and in 1554 took part in the siege of Siena. He was guilty of rebellion against Charles V of France, and later fought against the Turks in Hungary. In 1559 his uncle, Angelo dei Medici, was made pope, under the name of Pius IV. This stroke of fortune was not to be despised. Marco immediately forsook his military career, went to Rome and took the habit of the ecclesiastic. His career in the church was no less brilliant than in the army. In 1561 he was created Cardinal and served in many important posts throughout the papal empire. His love for the hills of Tusculum led him to obtain from Cardinal Alexander Farnese the Villa Angelina. This, the first building upon the Mondragone estate, is the one now known as the Villa Vecchia.

In the autumn of 1572 the Buoncompagno pope, Gregory XIII, visiting the Cardinal, drove with him up the hillside en route to the Villa Rufinella. The marvelous view so charmed the pope that he remarked upon the adaptability of the ground for a villa site. As was the fashion in those days, the cardinal immediately took the pope's suggestion as a command and

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THE VILLA MONDRAGONE

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THE VILLA MONDRAGONE—ENTRANCE COURT

was soon busy building the first wing of the present villa. A few years later, between 1577 and 1578, he built a second wing which was called the Palazzo della Retirata, and the entire constructions, with their parks, named Mondragone, in honor of the pope, whose crest was a dragon.

When Cardinal d' Altemps died, in 1595, the villa, together with the adjacent Villa Angelina and all the Tusculum possessions of the Altemps, passed into the hands of his nephew, Gian Angelo, from whom, in 1613, the whole property was secured by Cardinal Scipio Borghese. Under this noted builder and his uncle, Pope Paul V, the villa reached its maximum development; wings were added, terraces erected, fountains built, and gardens planted.

Below on the hillside Count Ferdinand Taverna owned a villa whose grounds touched those of Mondragone. This villa he presented to Paul V and the Borghese pope and his nephew immediately rebuilt the house and proceeded to throw the two villas into one. Below the Villa Vecchia, across the road, the great bastions of the Cenci palace were turned into a garden and called the Bargo Borghese, which today has been corrupted by the natives to "Il Barco." The entire project was never completed, and much of the part which did exist has disappeared. Still, as a few of the main roads and lines remain, it is not hard to form an idea of the magnificence of the scheme.

Upon the death of Paul V, in 1621, and of his nephew a few years later, the villa started upon its decline. When in 1626 Urban VIII (Barberini) built his villa at Castelgandolfo, the seat of the popes upon the Alban Hills was moved to the west and Mondragone, together with the other villas of Frascati, lost much of its former splendor through neglect and decay. The Villa Borghese later was secured by a family named Parisi, but the old name persisted so that it is still known to the folk of the countryside as the "Borghese."

At the time of Napoleon, Mondragone was completely abandoned, though his brother, Lucian Bonaparte, at this time owned and lived in the Villa Rufinella. For a while it seemed as though the villa might recover some of its former glories, for the marriage of Pauline Bonaparte to Camillo Borghese led

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to the belief that the hillside would now become the seat of the family of an Emperor, but Pauline, when she came to Frascati, preferred to stay in the Casino Borghese, now the Palazzo Micara, on the Via dei Merli, and the villa remained with its solitude unbroken.

In 1821 it was laid waste by the Austrian army of occupation, marching on Naples, and it was at this time that most of its decorations, its paintings and its sculptures vanished. This despoilation of the villa was added to by the dishonesty of the Borghese administration at this time. The desire of the men in charge of the estate to add to personal income caused most of its art to disappear. Later in the century the English princess, Gwendoline Borghese, made plans for the villa's restoration, but her early death put a stop to them. The little art which was left was brought to the Borghese palace in Rome and the villa was left a giant skeleton.

Under Pope Leo XII, and at his urging, Prince Marcantonio Borghese had the villa repaired and munificently turned it over to the Jesuits for an educational institution. Thus it remains today; its former galleries are class rooms, its gardens playgrounds, and its terraces and slopes once crowded with the entourage of cardinal, pope and emperor now form the grazing place of cows.

VII.

A villa which was being built and added to for a period of nearly fifty years was naturally the composite product of a number of artists, yet when names are mentioned that of Giacomo Barozzi da Vignola seems indelibly associated with Mondragone. One can well realize the reason for this when one compares the terraces at Frascati to the bastions at Caprarola, and considers the immense reputation for villa architecture which Vignola had acquired. Still, when facts are faced, it seems highly improbable that he did anything more than influence the character of the design by the example of his other great works. Vignola died in 1573, shortly after the villa was started, and it is doubtful whether he was connected in any way with its building.

That Vignola made sketches for the design of certain parts of the buildings is well within range of possibility, but it seems evident that this was not the case with the most conspicuous feature which bears his name. The great garden loggia attached to the eastern end of the villa and called the "Portico del Vignola" not only was constructed almost forty years after his death but in no way resembles his style, being distinctly of the school of Michelangelo. If Vignola had designed any of the loggie, it seems most likely that it would have been the two-storied loggia facing the entrance quadrangle. Here the whole treatment shows his characteristics, and the construction of it is attributed to one of his greatest pupils. Except for the desire to link the name of one of the greatest architects of Rome to one of the greatest villa compositions of the Alban Hills, there seems to be no reason for taking credit from the artists who actually worked at Mondragone, yet it cannot be denied that no matter to whom credit be given, the spirit and name of Vignola continue to preside over the hillside.

The architect who commenced the work for Cardinal d' Altemps was Martino Lunghi the Elder, a pupil of both Vignola and his well-known follower, Della Porta. This fact undoubtedly accounts for the spirit of the central and oldest part of the constructions. However, it may well be observed that in the design of the northern façade of the central mass, Lunghi clearly shows characteristics seen in the court of the Borghese palace in Rome and other examples of his work. In the southern façade, which contains the two-storied loggia facing the entrance quadrangle, these characteristics are not evident. This fact gives added weight to the thought that in this façade Lunghi was influenced by or working from sketches left by Vignola.

The garden loggia, or so-called "Portico del Vignola," was designed and commenced by Flaminio Ponzio, the architect of the Borghese Chapel in the Church of Santa Maria Maggiore, at Rome. The beautiful entrance doorway in the southern wing is also attributed to him, and one can readily see by an easy comparison that these two magnificent features were designed by the same hand.

Ponzio died before the garden loggia was finished, and the work was carried to its completion by the Flemish architect, Jean Van Santen, known in Italy as Giovanni Vasanzio. Just how much other work at the villa was done by these two men cannot be definitely known, but it is probable that they worked extensively throughout the buildings proper.

The brilliant genius of Giovanni Fontana is responsible for the great gates, terraces and bastions, with their accompanying fountains and balustrades. He reaches his most signal triumph in the design of the water-garden and hemicycle which face the "Portico del Vignola" at the further end of the garden enclosure.

The gardens themselves were laid out and planted by Carlo Rainaldi, who achieves more lasting fame from the beautiful western façade of Santa Maria Maggiore, which is a living presence, while the gardens of Mondragone are found only in imagination.

Together with the gardens, nearly all the sculpture and painted decorations have disappeared, so that to name artists would be dealing entirely in probabilities. There is one noteworthy exception, however, for the arabesques of the north loggia have been fairly well preserved. These were done by the Zucceri, or their school, and suffice to give us a definite starting point in the forming of a more accurate visualization of the

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richness and beauty which once abounded in the halls.

One sees the villa today as a product of the 17th century; even the two-storied loggia, which is the nearest approach to untouched 16th century design, has its main frieze decorated with the Borghese eagle, showing at least a change from the original design, if not a new scheme, at the later period. The great dragon fountain was built for Paul V, and it will be noted that its upper basin is supported by eagles. Everywhere, instead of the Buoncompagno dragon, one finds the Borghese partnership of the dragon and the eagle.

VIII.

Though knowing the artists who built and the years of the building, it still is difficult to estimate the original scheme or the order in which the various parts were added. It seems most likely, however, that the great central block of the house was constructed first. The circular antechamber, before mentioned as adjoining the entrance loggia, was probably the well of a spiral staircase, invariably met in a villa of this period. When the other wings were added, this stairway was removed and a more ample stair, more fitting to the large entourage of Paul V, was constructed in one of them.

The great quadrangle now surrounded by the wings of the villa was probably at one time a "parterre" constructed upon retaining walls and making the formal setting of the villa toward the more private portion of the grounds. Examples of this are so common that a repetition of names and places would be odious.

At this time, the main entrance would have been below, or at the side of the great north terrace whose form must have differed from the present design executed by Fontana but whose level was the natural stopping point for carriages approaching by way of the Monte Porzio road and the cypress alley. In this case what is now the villa chapel would have been a reception hall, at the rear of which the stairway ascended to the main living rooms on the floor above. This same scheme can be seen today in the Villa Medici in Rome.

That the so-called "Portico del Vignola" came before the bastions adjoining the central part of the house seems altogether likely. The bastions, it will be noted, are unsymmetrical. The one on the east is distinctly the longer of the two and obviously so constructed in order to afford ingress to the portico from the north. However, due to the placement of its peculiar features, particularly the large buttress-like projection from its northern face, one can see that the bastion was not lengthened at a later date but originally constructed to fit the necessary space, and together with the one on the west an appearance of symmetry was obtained without symmetrical dimensions.

The dragon fountain, the northern terrace, the western and southern wings, as well as the greater hemicircle on the south, are all of this later period. The northern terrace is unsymmetrical about the main axis as it was constructed or altered to conform to the two upper bastions, but the effect of symmetry is never lost.

One detail of construction is of interest as it shows the careless carefulness, or the careful carelessness of the builders. When the southern wing was built, the great portal, through which a vista is obtained from the entrance loggia, was found to be over two feet off axis to the east. In order to correct this careless error, the center of radius of the great hemicycle was shifted eastward to a new axis formed by the continuation of a line passing from the center of the entrance loggia through the center of the portal. The niche in the hemicycle was made to act as the stopping point of the vista, by being placed also on this new line, so that the error is noticed only when measurements are taken.[1] Above, in the upper garden, this new axis also obtains, the small niche which forms the final stop being placed in the wall considerably to the east of the line established as the main axis by the cypress alley and terraces to the north.

But no matter in what actual order the parts were built, its form as it exists today is due to Paul V and his nephew. How well the Borghese loved their gorgeous pleasurehouse can well be imagined not only by the remnants of its former splendor but by the inscriptions graven in Latin over the four doors of the garden loggia:

"Here comes Paul when he lays aside the heavy burden of the world. Withdraw dull care."

"Why ask for the Thesalian Tempe, why for the gardens of Adonis? To you this villa of the Dragon will be worth them all."

"Even as the groves of the Hesperides yield the palm to ours, even so is our Dragon a gentler guardian."

"From here you may see Tibur, and the hills and fields of Cato. What fairer sight can meet your gaze?"[2]

The temporal glories of Mondragone may have passed, but the spiritual glory which so soothed the popes of yesterday still lives. As one stands within the great sweep of the northern terrace in the cool light and hush of evening and watches the Tyrrhenian sea turn to beaten brass as the shadows lengthen across the hills of Rome, even now that spirit will drive "dull care" away and, if only for a moment, leave mind and soul in peace.

JAMES CHILLMAN, JR.

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[1] For sake of argument it may be noted that if the hemicycle was constructed first and the error made at that point, then the great portal was placed off axis intentionally, so that the vista would obtain.

[2] To Professor Nelson McCrea, of Columbia University, we are indebted for assistance in the translations of the several inscriptions.—J. C., JR.

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Bright Lights[1]

IT WAS the last day of the gunning season for bred birds. Since breakfast we had been out on the fields and in the marshes following the dogs; and on this evening for an hour or more had been sitting around the open fire spinning stories and exchanging experiences. I felt an almost overpowering desire for sleep. My eyes stung and my lips drooped. It appeared that my fellow story-tellers also were experiencing the same sensations. One remarked that he always felt this drowsiness after an hour or two in front of the fire. He believed it to result from the dry heat radiated by the hot embers.

Now it happened that after returning in the afternoon from a fifteen-mile cross-country tramp with gun and dog, and before the light had failed, several of us had sat in front of this same fire and had noted no such effect. As a matter of fact, the result had its cause not in the fire, but in the bare frosted incandescent lamps by which the room was lighted and which were seen against the dark finished woodwork of the walls and low-hung ceiling. When I suggested this, two or three of the men remembered suffering from similar effects under similar conditions, and so, the discussion continued to revolve about methods of artificial illumination.

I recalled that when in Philadelphia shortly before the war a friend had asked me to lunch with him at his club and incidentally visit the bar, about which there were many complaints. No one found any pleasure in remaining long in the room. It was not attractive.

Architecturally, I found the room to be very fine. The finish was executed in an acid-treated oak or walnut—I forget which—and both walls and ceiling were richly decorated and carved. Yet the whole tone of the interior was dark. Day lighting was obtained through two large, clear, glazed windows on one side. Artificial lighting was obtained by a handsome bronze ornament hung from the ceiling, and from similar bronze ornaments attached to the wall pilasters, all of which ornaments were equipped with a number of imitation candles capped with bare, frosted, round-bulb incandescent lamps.

Sitting at one of the tables, I found that the windows, by contrast enormously brighter than the adjacent walls, were exceedingly trying. My friend, sitting opposite me and between me and the windows, became a black silhouette, his feature quite indistinguishable. And, similarly, the architectural treatment of the room, both in general and in detail, was obliterated. I had an almost irresistible desire to shield my eyes from the windows exactly as, on a mountain top, the eyes are shielded from the glare of the sky in an effort to distinguish distant objects of interest. Pulling down the fabric shades to eliminate the glare from the windows reduced the light to such an extent that artificial illumination was necessary. But, due to the brilliant spots of the incandescent lamps seen against the dark woodwork, the result was even more painful. Now the effect was precisely the same as in the shooting lodge living room mentioned above. In less than half an hour my eyes were prickling with the strain put upon them.

Again, I was reminded of a similar case in a large banking room—a most exquisite interior famous in the history of recent American architecture. This room has a coffered ceiling covered with soft blended designs in color, and from it are suspended three large and wonderfully wrought gilded ornaments, the outside of which are *decorated* with the round white bulbs of frosted incandescent lamps. Apparently the character of these lamps was determined, not with any relation to the light they would give, but solely with respect to the size of the bulbs in inches which fitted into the design of the chandeliers. In total there were 900 forty-watt lamps installed! Enough light to illuminate a mile of Fifth Avenue on the present basis! Enough light to illuminate 18,000 square feet of clerical office space to that desirable high degree of intensity found only in the few cases where the employer is awake to the known importance of modern lighting methods, and to the effect of such lighting in increasing the efficiency of his force, in lessening time off, and in reducing the number of errors made.

What was the result in this case? The room was drowned in light. The ceiling was obliterated from the design, precisely as though a veil or gauze of small mesh had been stretched between the walls at the level of the chandeliers. To make it possible to see beyond and above the chandeliers, these lamps must be changed to ten watt filaments (one quarter of the *rated* output), and to reduce their brightness to a reasonable amount, the ten-watt filaments must be installed in bulbs of the diameter ordinarily used with forty-watt filaments, and, even then, burned ten per cent below their rated voltage, which means a still further reduction in light output of about twenty per cent—a total reduction of about eighty per cent. Nor would it do merely to reduce the number of lamps, for the brightness of the remaining lamps would have nearly the same effect in blinding the eye.

Recall, as probably all of you have experienced, that a match or a candle lighted in a dark room and held within the field of view, or unless shielded from the eye, is immediately blinding. Nothing in the room can be seen. And, furthermore, if this condition is maintained for a time, the eye will begin to smart and feel too big for its socket. If you do not believe this, try it with a candle! Yet the physical brightness of the match or candle flame is approximately one-fifth that of the frosted bulb incandescent lamp, and about one twenty-five-hundredth that of the exposed filament. If, on the other hand, the room be painted white, not only will the exposed match or candle flame be reasonably comfortable, but a bare, clear-bulb incandescent lamp, if not quite close to the eye, and unless this condition is maintained over a relatively long period, will not be trying. This is the reason that if the walls and ceiling of a room be light in tone, the room may be illuminated with relatively bright fixtures (now generically called *luminaires*) that would be insufferable in a dark finished interior. This is also the

[1] A discussion of illumination presented before the New York Chapter, A. I. A., 9 January, 1924.

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reason why interiors used for purposes where constant and close visual work is done, and a large quantity of light is therefore essential, must have light finishes. Otherwise the visual efficiency, and its concomitant, the bodily efficiency, of the working force will be reduced progressively. Time out, due to stomach and nervous disorders, increases. Errors in work occur with greater frequency. And, lest the reader think I exaggerate, these are not matters of hearsay, but matters of record obtained through careful tests and quantitative observations.

Light Intensity and Absorption

Before I leave the question of lighting interiors whose appearance is a primary factor in design may I draw attention to a fundamental fact in physiological chromatics which has an important bearing on this subject?

The higher the intensity of the illumination on any colored surface, the less saturated does the color appear. If lighted to sufficient intensity every color becomes white to the eyes, and the approach toward white caused by any given intensity of illumination depends on the chromatic character of the color. Thus, one pigment in a mixture of pigments may desaturate more or less than the other pigments in the mixture, and so the mixture as a whole will not only go paler as the illumination increases, but also will change in hue. Furthermore, the resulting hue of any pigment mixture is a direct function of the chromatic quality of the light used to illuminate it.

Thus if the desired appearance of an interior depends on a delicate color balance in the finish, the colors used must be selected under the sort of light by which the interior will be seen and, furthermore, the quantity of light used must be carefully adjusted. Since these effects are more marked in dark hues than in light, unsaturated hues, it seems obvious that a dark finished interior must have a low value of illumination, and, further, that dark finishes should not be used in interiors which, for working reasons, must be brightly lighted.

Thus having shown, from purely physiological reasons, that working interiors must have light finishes, it may be well to point out a further and purely monetary advantage of such finishes.

Let me begin by asking you to think of light as something physical. It is a form of energy, precisely as is the heat emitted by a radiator. If a room be carefully heat-insulated and an active radiator placed in it, then since the heat cannot escape, the temperature of the room will rise until the rate at which heat is lost through the walls, flooring and ceiling is the same as the rate at which heat is emitted by the radiator.

The same is true in a room light-insulated and in which a burning lamp is placed. If the light is not lost or absorbed, *the intensity of illumination* in the room, *or the rate at which light is received on the interior surfaces* will increase until it equals the rate at which light is emitted by the lamp. So, to illuminate a room to a desirable intensity, the lamps used must emit light at the same rate at which light is absorbed or lost at this intensity, either by transmission, absorption or both. Obviously the less the rate of transmission or absorption, the less need be the rate of emission to maintain the desirable balance, and the smaller or fewer need the lamps be.

The counterpart of absorption in the finishes is the reflection factor of these finishes, and the less saturated the color of these finishes, or the nearer they approach white, the higher will be their reflection factor and the less will be the loss of light.

A room with the usual amount of window area and walls and ceiling painted tan will require approximately twice the amount of light emitted by the lamps in semi-indirect luminaires to maintain the average illumination at a fixed value, than will be required if the walls and ceiling be painted white. This assumes the usual floor finish, either dark wood or linoleum. If the ceiling only be repainted white, the illumination produced by the same lamps will be increased approximately thirty per cent.

It is the rate at which energy is supplied to the lamps, and there converted into light, which determines the rate at which the meter wheels go round and sets the amount of the lighting bill.

Do not misunderstand me. I am not arguing against the use of beautiful and decorative lighting devices as part of the interior furnishings, nor am I opposing the use of soft or rich color in finish or decoration. I obtain quite as much pleasure from nice things and well-designed interiors as any of you. But our ancestors were not called upon to do the sort of work required of us, and when they attempted to do so with the usual light sources of their day, unshaded, they generally ruined their eyesight in the effort. This is a matter of optical history. Nor can you expect the worker, even when only casual visual labor is required of him, to do such work with the help of lighting devices of a design suitable for the comparatively dim candle or the open and almost equally dim kerosene flame, and equip them with the modern incandescent lamp. It simply cannot be done, for the result is disastrous. Does it require so much imagination that designs for fine lighting fixtures drawn around modern requirements and modern light sources cannot be had? Does it require more than common sense to tell us that the appearance of interiors must be adapted to the service expected of them, or to the sort of work to be done in them? Is it practical to create a design such that the sort of illumination necessary to make the structure useful cannot be had, or, if had, destroys the effect sought?

Lighting Problems in Factories

Now let us carry these conclusions over into cases where appearance is of minor importance.

A short while since I was called upon to investigate the lighting in a large factory. The buildings, erected some years ago, were quite wide from wall to wall—in some cases over 100 feet. The ceilings were relatively low (12 feet). As modern factory buildings go, the windows were small, but numerous. As usual the day lighting through the windows was effective for a distance from them only three times their vertical dimension: in this case a total of about 24 feet. Beyond this point any close work must be done under artificial illumination, and, since the adaptation of the worker's eye is set by the bright window areas within their view, a very large

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quantity of artificial light on the work is necessary. In this factory artificial illumination was accomplished by drop cords with reflectors hung near the work. Of course this left the surroundings in relative darkness. So, two sources of high contrasts were introduced into the field of the workers' eyes, the windows and the brightly illuminated work.

What was the result? An extremely low efficiency of the workers located at any distance from the windows, headaches, time out, and almost general granulation of the eyelids. Finding these results, the workers had been generally removed from the interior spaces, leaving nearly fifty per cent of the floor area unproductive. But a further defect had developed! The workers on the sunny side near the outer walls, finding the glare insufferable, had formed the habit of hanging pieces of translucent material, cheesecloth and the like, over the windows. This not only sadly interfered with natural ventilation, but also and again reduced the daylight working area to the point where I found it—a thin row of workers along the outer walls, with the remainder of the floor unoccupied. And the owner was talking of erecting new buildings to get sufficient working space!

Realizing the defects of the existing buildings, in the often unanalytical fashion, the owners had drawn plans for buildings three bays wide, with the outer walls almost entirely composed of glass.

Call to mind the fact that it costs more to fashion the necessary hole in the wall and install the cheapest form of window in it than to build the equivalent wall area in poured concrete, or of bricks laid at the rate of 1,200 a day. A more expensive window than this merely costs more money. And bring to mind the fact that every square foot of window area, assumed airtight, requires approximately three times the radiation necessary to supply the heat losses through a square foot of wall area 12 inches thick. If the windows are not airtight, as they never are, there is no telling how much additional radiation will be required to maintain a suitable interior temperature on a wintry day with a northwest gale blowing. Thus, taking into account the increased first cost of the larger windows, the necessary increased first cost of radiation with its associated piping and boiler capacity, together with the window-cleaning costs, heating costs, interest, depreciation, and amortization charges, it is evident that the window may be a very expensive means of lighting. Indeed in many cases the annual cost of daylighting through windows or skylights will be considerably greater than the annual cost of high-intensity artificial lighting with its necessary corollary, the cleaning and maintenance of light-finished interior surfaces.

Furthermore, the three-bay wide building requires surrounding outside space for proper day lighting. The fixed carrying costs of this ground area, not built upon, must be charged against the building itelf. Again, for the same total floor area the building cost per square foot floor area of a three-bay wide building is greater than the cost, per square foot floor area, in the equivalent wider building. Therefore we find that even the above summary of costs does not include all the charges which should be entered against the cost of day-lighting.

And so far we have said nothing about the working value of the natural illumination obtained in this manner, even if, for the sake of the argument, we assume that it costs no more than proper artificial lighting.

Not long ago I visited one of these all-glass factory buildings, and found practically every worker stationed near the windows equipped with an eye shield to protect himself from the frightful glare. Those further from the windows could hardly see to do their work because, by contrast with the windows, the work seemed dimly lighted. On the sunny side of the building fabric shades were pulled down, and not only interfered with the natural ventilation, but were so opaque that the greater part of the illumination on the work tables came from the windows on the opposite side, and so cast bad shadows. But, at that, the conditions were better under the shaded windows.

If the blinds had been translucent enough to give a balanced illumination, the glare from these large bright objects near at hand would have been as bad, or worse, than the narrow strip of sky seen through the opposite unshaded windows.

In another such factory I found the windows glazed with fine figured glass and therefore, being themselves intensely bright and near at hand, caused a distinctly painful sensation in the eyes.

There is nothing inherently wrong in intensive illumination either natural or artificial, provided it is attained so that the eye functions naturally and without strain. The eye is peculiarly fitted and shaped for the sort of lighting we find out of doors where the intensities are vastly in excess of anything attainable indoors, or indeed in any way practical except perhaps on the moving picture stage. But the maximum intensity is overhead, where it should be, and the contrasts are so graded that the direct horizontal field of view is of comparatively low brightness. Furthermore the single natural light source is over 90 million miles away and, in spite of its huge size, subtends a very small angle of view.

Excluding the direct view of the sun, contrasts in nature are of the order one to twenty. In the factory above mentioned the contrasts were of the order one to several thousand. Yet brightness contrasts in the field of view control visual efficiency.

In Conclusion

You may wonder whether from this I am arriving at the conclusion that in such workplaces windows should be eliminated and artificial illumination used entirely. To this extreme, with the accompanying necessity for purely artificial ventilation, even though in many cases the working conditions may be greatly improved thereby, I am not prepared to go. However, we should realize that the extreme of window areas has neither rhyme nor reason, and generally makes for bad lighting conditions.

I am certain you will agree that the smaller window makes for better architectural appearance. Such windows, screened in a way which redirects the light on a white ceiling where the light is diffused downward, and which does not interfere with natural ventilation, have proved entirely practical. Any deficiency in illumination

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can then be made up by artificial means. Strange to say, where such arrangements have been installed, the workers themselves object if a screen is raised. Naturally the first cost and maintenance cost is higher than with the unscreened window. But what is that compared to the value of a small increase in production? And it is known that such increases are higher rather than lower.

I think we may conclude with the remark that much work remains to be done in designing and planning working places so that they may be properly lighted either by natural or artificial means. In closing, I quote from the most important single contribution to the subject of illumination, Dr. H. E. Ives' little paper on "The Measurement of Brightness and Its Significance":

"The art of good lighting is the art of the proper distribution of brightness." BASSETT JONES.

Housing and Community Planning

CLARENCE S. STEIN, *Associate Editor*

Town Planning in England

In the more recent English books on Town Planning there is to be noted a very hopeful tendency to find substitute human values for the purely statistical and academic procedure which has too largely controlled past City Planning practice, especially in our own country.

In the first of two text books[1] on Town Planning by Professor Adshead of London University no small portion of the book is devoted to a discussion of the sociological aspects of the subject.

Professor Adshead goes back to the primitive origins of the city and of city folk. He presents the gradual development of the hunter, the agriculturist, and the miner, in which the agriculturist is the constructive town builder and the miner the forerunner of the modern industrial townsman.

"The miner is essentially a man who, having found a seam of coal or a vein of lead, strikes a camp. He has no notion, like the peasant, of settling on the land and of building a house; he is hasty, is satisfied with a cubicle, a gin-palace and a chapel, and this makes his town. . . . Today we see around us everywhere the great attack of the miner on the peasant. All the manufacturing towns of today are practically miners' towns; they have come under mining influences. The mining influence is ever being unconsciously absorbed by the peasant, whose farmstead is every day losing the direct touch of the old peasant's hand. Instead of our modern farmstead being a peasant's building, naturally constructed of local material, it is now very often a more or less machine-made structure constructed of artificial materials: corrugated iron, asbestos slates, steel principals, and all sorts of new things that have emanated from manufacturing towns."

Regional Planning is touched upon in showing the origin and makeup of the various industrial regions of England. The Lancashire region is especially interesting. Through the early establishment of the wool industry in this region there gradually evolved the greatest cloth manufacturing district of the world.

"An interesting fact in connection with an industry like this is, that when once it has obtained a start and has trained a number of operatives, it takes a very great deal of opposition and bad luck to destroy it."

Then showing how vital is the influence on town growth of changing conditions due to science and evolution:

"First, then, there is Liverpool, engaged in buying raw material, in warehousing it, and to a certain extent in manufacturing. Then there is Manchester, engaged in distributing and collecting between the manufacturing centers that are situated in close proximity. The connection between Manchester and Liverpool is very complicated. Quite recently there has been built a ship canal, and many transactions previously carried out in Liverpool are now carried out in Manchester. A great many of the warehouses in Liverpool are empty, the cause being principally the advent of motor transport. Goods can now be taken away from the docks by motor direct to the factory. Railway transport is largely being dropped, which means that a cotton mill can be placed almost anywhere so far as transport is concerned."

Let us hope it is more true in England than at present in the United States that

". . . no great industry is today being promoted without its industrial village. An industry in the future will be hopelessly outclassed unless at the same time it considers the housing of its operatives."

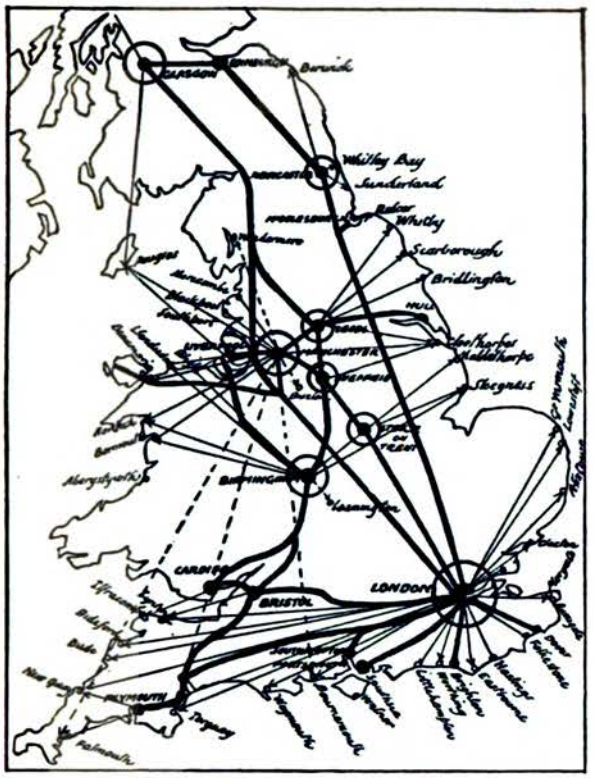
Then Professor Adshead traces the history of housing in the Lancashire region—first the crowded "muddle of cottages," while masters had houses of "thirty bedrooms"; the growing middle class who "built themselves houses on the confines of the town"; then the "suburban" movement and finally the summer holiday which brought about the resorts "until today the building of recreative resorts has become a matter of vast speculation" with ever-increasing specialization in cheap amusement resorts for those who bring their picnic baskets, to the fine, exclusive all-year villages for retired people of means.

We here see various movements corresponding with certain fundamental changes going on in the United States in which towns on motor highways are expanding while railroad towns are "dead," to use the favorite real estate expression. An interesting comment on this development is found in Professor Adshead's chapter on Transport:

"It is coming to be seen, however, that certain classes of residential property should be somewhat inaccessible. The running of a railway to a small suburb of middle-class houses, which previously was situated, say, one mile from the nearest station, will quite likely make the land in the vicinity more saleable, but in doing so it may depreciate very seriously the houses already there. It is as important at times to keep railway stations, tram routes and main-traffic roads away from residential areas as it is at other times to add to their convenience by introducing a new traffic route."

[1] Town Planning and Town Development. By S. D. Adshead, M.O., F.R.I.B.A., Professor of Town Planning, London University.

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THE RELATION OF ENGLISH TOWNS

Those with outer circles are centres of related groups or conurbations. Heavy lines show the main railway arteries of the country. Thin lines connecting recreative towns with these conurbations indicate those upon which they depend. Dotted lines indicate direction in which the more wealthy emigrate.

Under "Areas of Utilization," we find:

"To understand a town we must investigate its functional organization and the essential purpose of its different parts. In the Town Planning Act, it is provided that a Local Authority may determine the character of the buildings to be erected in the area of the scheme. Thus we have statutory powers which enable us to determine the prospective character of the different districts under consideration."

At the same time Professor Adshead makes it plain that it is better to recognize economic changes and guide them, rather than attempt to block them by too much restrictive legislation.

This is in marked contrast with certain rigid practices of zoning in America, such as in the case of a recent suburban town of three by four miles extent, in which only one business district is to be permitted and no ready method has been arranged for meeting future inevitable change in character over the entire remaining area which, with a few minor exceptions, is to be restricted to one-family houses.

A few quotations seem pertinent from the chapter on Town Extension:

"It is generally agreed that our large towns, and especially London, are becoming altogether too unwieldy, that such long distances have to be travelled in getting from house to office and place of business, from there to places of recreation, and generally from one place to another that, notwithstanding the facilities afforded by modern systems of transport, altogether too much time is today spent in travelling. An obvious solution of the difficulty would be to build new and independent towns—at the same time discouraging in every way possible any enlargement of existing and overgrown towns."

Those familiar with present conditions in and about New York will realize that here we have one of many cities which have far overgrown their usefulness, though we are still planning for even greater worlds of expansion to conquer and City Plan. That the English planner is not satisfied with a conception of Regional Planning which amounts only to an extended City Plan is indicated by:

"It is obvious that the closer the connection with the parent city the greater will be the attraction of the one to the other. This is a natural law applicable to towns as well as to a planetary system, and as a corollary the farther away the more independent will they be—the point is, that the satellite town must not be a mere appendage of the parent city, but an organism with functions of its own."

"Thus the first essential of a satellite town is that it be laid out to meet the needs of an organized community. . . ."

"The kind of interest that has been (usually) introduced is almost entirely the mechanical. We see very clever arrangements for the shaping of road connections and a wonderful adjustment of purely geometric shapes, but of real shopping streets, tram termini, children's greens, sites for garages, and incidents essential to the vital requirements of a community, there is practically no provision."

Some insight into the English housing policy is seen in:

"A housing scheme on the verge of a big city should not contain more than, say, 500 houses for one class in one locality; and it is better if isolated from the built-up area. Town development should provide that the population of any one housing scheme is limited to, say, 2,000 inhabitants, and each such scheme should be equipped with those shops, schools, meeting halls, recreative areas, etc., that are necessary to such a community."

This seems remote from some of our own city planning practice where our movements are largely controlled and restricted by a purely speculative method of city expansion, and in which our real estate operators boast of providing all the foresight for the people.

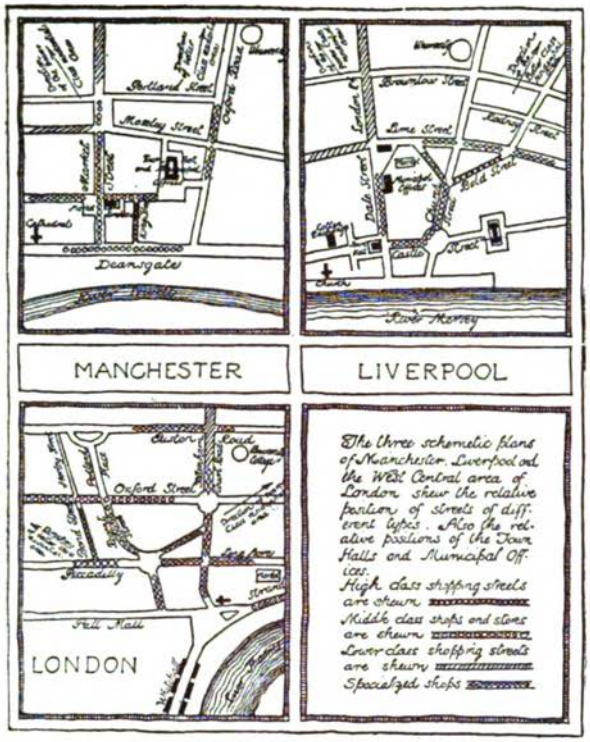
That the architect is to play a very definite role in English town planning appears in the following:

"In the residential area, site planning will take precedence over road planning, the roads being only cross connections and a means of approach. Each site and its approach should be complementary as regards design."

Compare this with Rules for Land Subdivision of American Cities. Little wonder our architects find scant interest in city plan schemes and restrictions which standardize engineering practice, with consequent monotony, and throttle imagination and freedom of design at every turn. If such is the price of our land speculative system, it is certainly a colossal price to pay in future monotony, ugliness and mediocrity and it contrasts unfavorably with recent interesting housing development abroad.

Under the title Transport the larger fundamental problems of regional planning—transport, and power produc-

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COMPARING LOCATION OF FUNCTIONAL ORGANS OF TOWNS

tion and distribution—are touched upon. This and the succeeding chapters on Traffic Requirements and Road Administration serve to bring out the importance of the subjects treated, rather than to add any new and significant points. In contrast, the chapter on Zoning deserves careful consideration and discussion. We quote:

"The Town Planning Act provides that 'height,' 'character,' and 'the number of buildings per acre' to be allowed within the area of the scheme are matters that can be decided by the Local Authority without reference to compensation. These are the most important powers the Act contains. They are also the matters that affect most nearly questions of efficiency and amenity. . . ."

"Germany and Sweden have statutory powers that provide for zoning in the same way. In many towns in these countries zoning is so exacting and the control of future development so drastic that it becomes a question as to whether the immutability of human nature has not been taken too much on trust. . . ."

"It might be well to remember that we have always to reckon with certain conditions of town growth that are immutable, and over which we can exercise very little control. . . ."

"Strictly speaking, the zoning of towns should follow the zoning of regions. Naturally the first question to decide in zoning a town is the part it can best play in relation to the country in which it is situated, having regard to its geographical and physical advantages, to its commercial relations, inherited traditions, and possible lines of communication with other towns. Every town has a part it is best suited to play."

After describing the persistency of local employment characteristics even after conditions for industry have become unfavorable, as in Sheffield, he remarks:

"So that in planning the development of an old town it is not enough to consider those advantages which it possesses that are purely physical and geographical; the human factor would appear to be the most important of all."

"Zoning can be too drastic, and unless practiced with a knowledge of the growth of towns and a clear view as to their future, may do more harm than good."

Only two broad principles are laid down for Zoning:

"1. In providing that the amenities of a town shall be preserved and improved, rather than threatened with destruction and probably destroyed. 2. In providing that a town's industries be carried on on sites peculiarly fitted and specially equipped for their successful carrying on."

"An actual example of what has been done in the way of zoning may be seen at Ruislip-Northwood, essentially a residential suburb of London. Here, under the Town Planning scheme which has been approved, there are areas where business premises alone are allowed, areas where business premises or houses may be built, areas where not more than 12 houses to the acre may be erected, areas where there may not be more than 8 houses to the acre, and areas where there may be not more than 4. . . ."

"It is, however, no detriment, as a rule, to have a group of roadside cottages situated close to big houses, or even a few shops. . . . As a matter of fact, there is very little to justify zoning for different sizes of houses in a residential area included in a Town Planning scheme, provided there is a minimum limit to the number per acre, any further restriction is best left to the dictates of the estate developer."

To those who have made much of the provision in the English Town Planning acts for a limit of families per acre—usually 12—it may be of interest to note the very significant fact that this is in cases interpreted on what is called a "unit" basis; i.e., if 5 acres are set off in a scheme for 60 families they may all be housed on one acre and presumably in one building if so desired—we quote:

"A group of five acres is termed a 'unit,' and each 'unit' must not contain more than a multiple of the prescribed number to the acre."

This has a particular significance to those who in zoning practice insist on districting according to the number of families under each roof.

The last half of the book is devoted to a detailed study of Garden Cities, Town Planning Acts, and Housing (private and governmental) in England, which has an almost purely technical value and is of little application to American conditions under prevailing land speculative methods. The book will, however, prove of value to students of this specific field.

The very brief reference to "America" in a chapter on Town Planning and Housing in other countries includes:

"Town Planning in its relation to housing has never had any serious statutory assistance, and has depended upon the enlightenment of the ordinary estate developer, and more recently upon the enterprise of the manufacturer who has realized the advantage of seeing his operatives well housed."

Students in America will not fail to wish Professor Adshead further success in the preparation of this series of works; with special attention, let us hope, to enlarging upon the human, rather than the statistical and legal phases of the problem of Town Planning.

HENRY WRIGHT.

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FORE STREET, RUISLIP
S. SOUTAR, *Architect*

Post-War Housing at Ruislip-Northwood

The first impression of the result of England's national housing is monotony. From the car window one glimpses the same rows of brick buildings with shiny red tiled roofs at every station. So this is the result of the great campaign for "Homes for Heroes"! So this is the best that millions of Government subsidy could buy! The Central Housing Bureau seems to have ironed out all the irregularities which give so much charm to the older English villages. But a closer view of some of the post-war development shows that old traditions are not dead. It is a delight to come upon such groups as those of Ruislip-Northwood. Here the architect, Mr. S. Soutar, has taken advantage of site, natural surroundings and variety of roof line to give, within a few years of their erection, that picturesque charm which so often comes only with age.

As a result of the acceptance of the policy of housing ex-service men and workers—if necessary, at Government expense—these houses, like all workers' houses built since the war, have been subsidized by the Government. The Local Authority bears the annual loss on these houses up to the product of a penny rate, which, in the case of Ruislip-Northwood, amounted to £330 per annum. The balance of the loss, which is borne by the National Exchequer, amounted last year to £8,900. The costs of construction were:

Type A—Living room, scullery and 3 bedrooms; £925 average.

Type B2—Living room, scullery, parlor and 2 bedrooms; £950 average.

Type B—Living room, scullery, parlor and 3 bedrooms; £985 average.

All houses have separate bathrooms and W. C.'s.

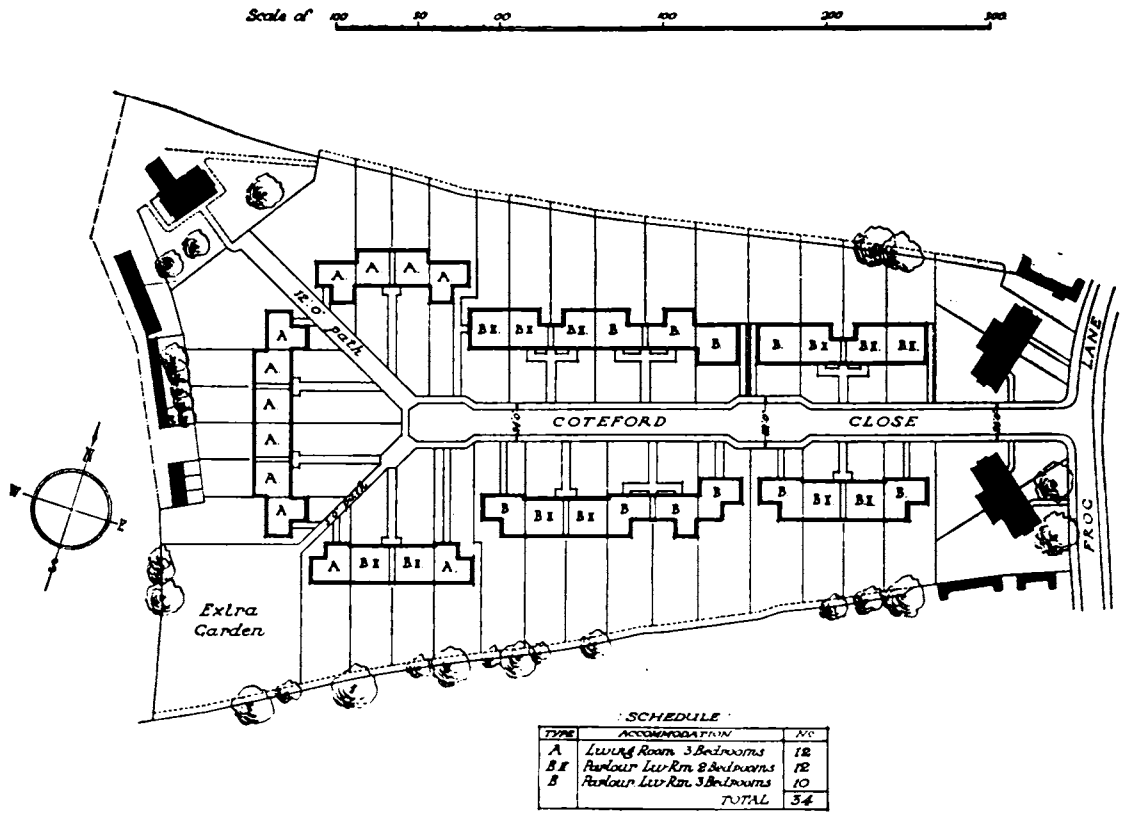
These houses were built between October, 1919, and May, 1922, most of them before the price of building began to drop. The average weekly rentals charged, which do not include taxes, are: Type A, 10 shillings; Type B2, 11½ shillings; Type B, 12 to 13 shillings.

There is a total of 229 houses built by Ruislip-Northwood, divided as follows:

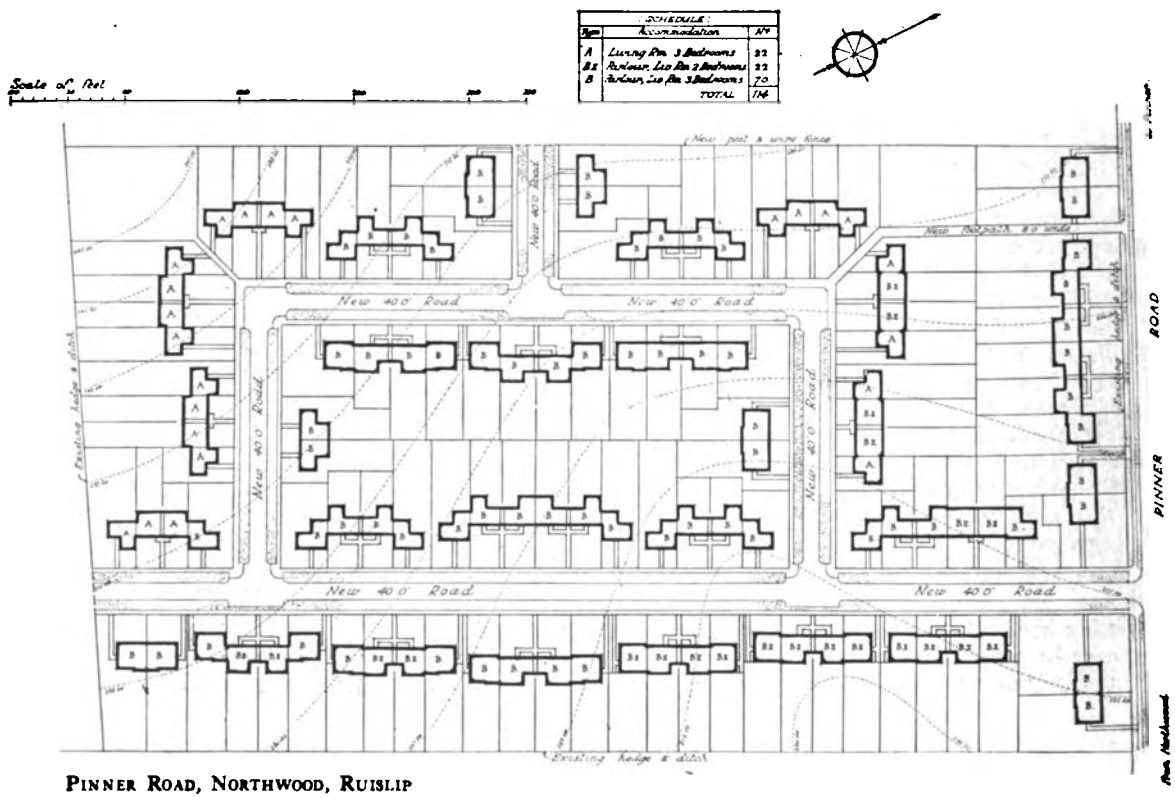
Ruislip Common.....	22 houses
Fore Street, Eastcote.....	34 houses
Clack Lane, Ruislip.....	59 houses
Pinner Road, Northwood..	114 houses

Some 90 per cent of the tenants are ex-service men and about an equal percentage are engaged in manual labor; the balance are young clerks. C. S. S.

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COTEFORD CLOSE, EASTECOTE
S. SOUTAR, *Architect*



PINNER ROAD, NORTHWOOD, RUISLIP
S. SOUTAR, *Architect*

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CLACK LANE, RUISLIP
S. SOUTAR, *Architect*



CLACK LANE, RUISLIP
S. SOUTAR, *Architect*

DEPARTMENT OF ARCHITECTURE
The Pennsylvania State College
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FORE STREET, EASTCOTE
S. SOUTAR, *Architect*

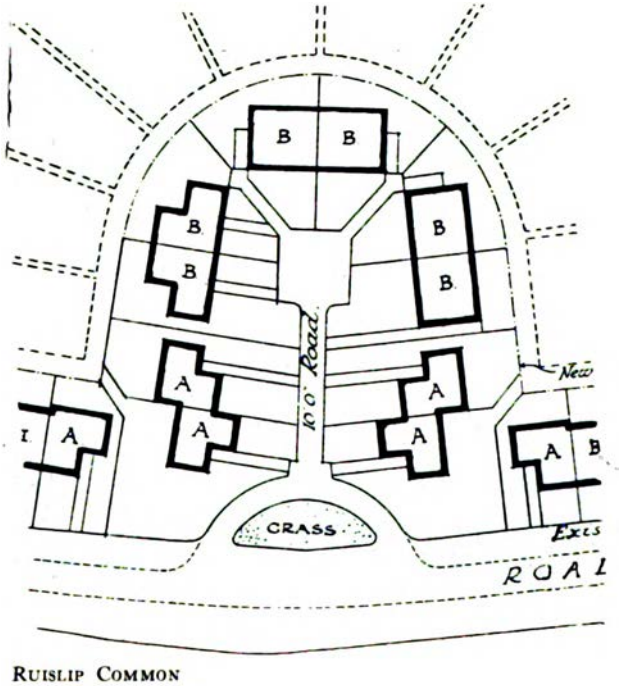


FORE STREET, EASTCOTE
S. SOUTAR, *Architect*

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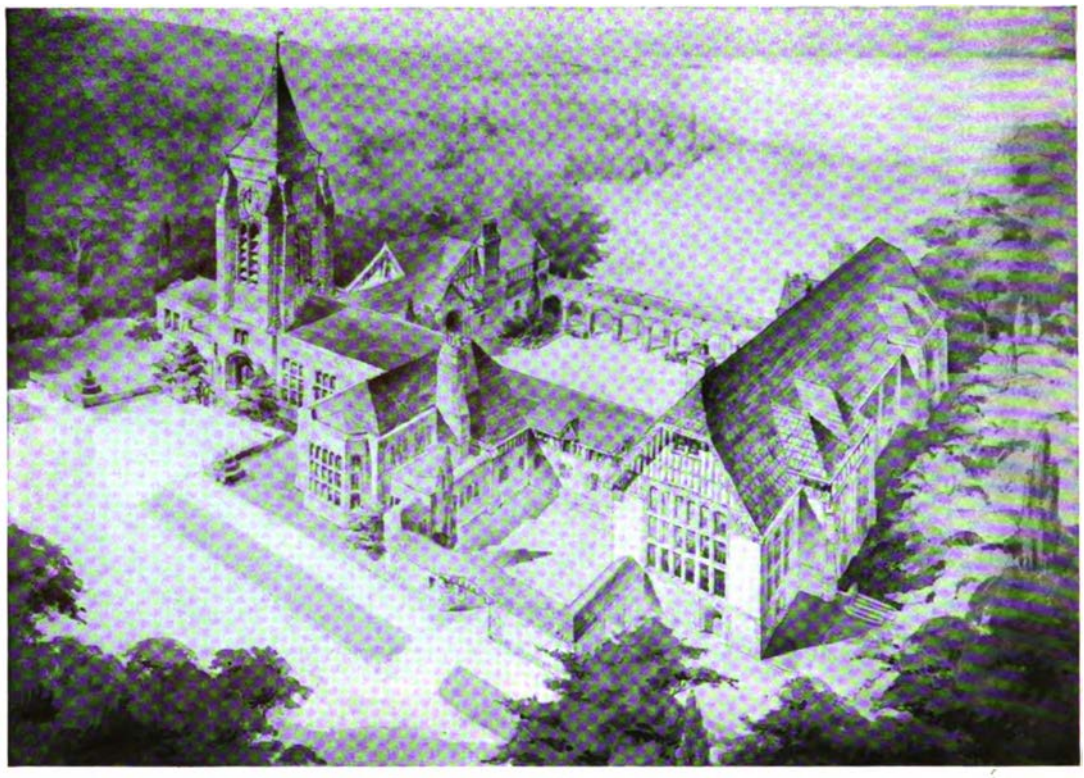


CLACK LANE, RUISLIP
S. SOUTAR, *Architect*

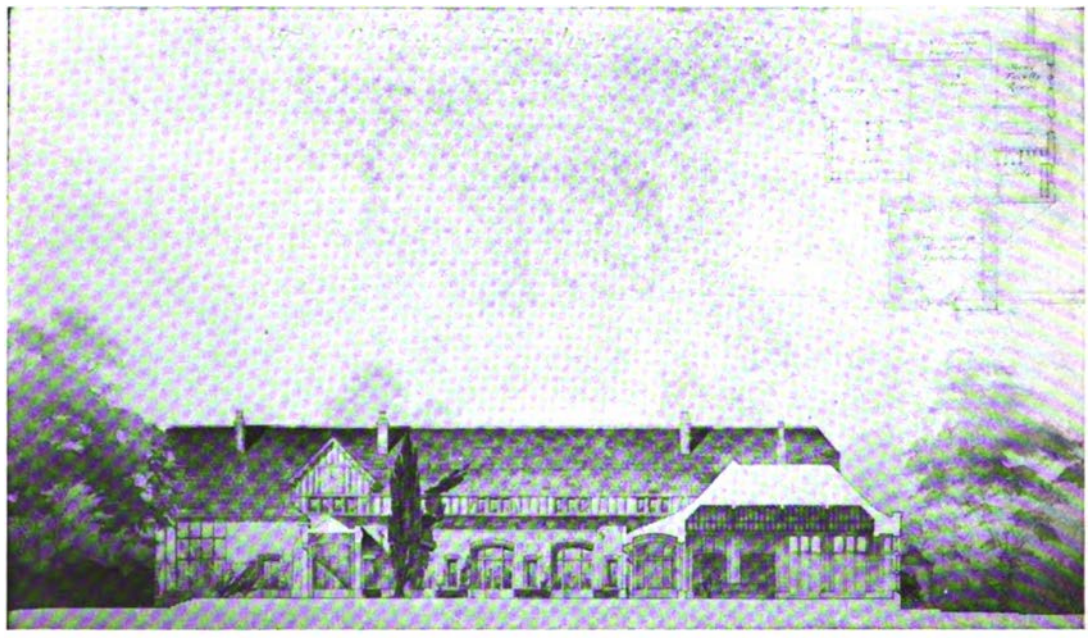


RUISLIP COMMON
S. SOUTAR, *Architect*

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THE LEBRUN TRAVELING SCHOLARSHIP COMPETITION—1924
THE WINNING DESIGN
Drawn by Otto F. Cerny
(See page 248)



THE LEBRUN TRAVELING SCHOLARSHIP COMPETITION—1924
SECTION TOWARD WORKSHOP
Drawn by Otto F. Cerny

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Four Drawings

SAMUEL V. CHAMBERLAIN

MEDINA

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THE BRIDGES
ALCALA DE GUADAIRA—SPAIN
Samuel V. Chamberlain

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GATE OF SAN ANDRE'S
SEGOVIA
Samuel V. Chamberlain

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THE TRIPLE GATES—CARMONA
NEAR SEVILLE
Samuel V. Chamberlain

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From Foreign Shores

The Influence of Environment

WOULD, for my own sake, that I might always undertake these voyages of review under the same and altogether satisfactory conditions obtaining as I pen (or rather pencil) these present words, which, if environmental conditions count for anything, should also be pleasant words. And this not only for my own sake but also that I might furnish my friend, Egerton Swartwout, eminent critic, with his desired basis for comparison; so that, in fact, he might determine, at least to his own satisfaction, in how far a certain unevenness of temperament, apparent in various articles from the same critical pen, might be due to the reaction of different environments, physical and spiritual, upon the mind of the reviewer; or in how far the departure from a normal blend of salutary acidity and saccharine alkalinity in the product of the critic might be due to the nature of the stuff set out for his inspection and mental digestion.

Now, I, at the present writing, am sitting in a pleasant bay window giving upon a sunlit avenue, along which smartly dressed people, presumably no, or little, better than myself, are wending their happy ways to church; whence later they will return, all under, let us hope, a still sunlit sky, presumably no, or little, better than when they entered the shades of the sacred grove. A balmy spring breeze is flirting with the filmy curtains at my window—and now! it fills the sails of my frail craft and bids me be about my more serious business—if anything can be more serious than a philosophical contemplation of the comparative virtues of cool, sacerdotal shades and warm, ingratiating sunshine—perhaps they are not to be compared—perhaps, after all, the human heart needs the combined and benign influence of the two—but the sunshine most! In this connection you will recall the line of Ralph Waldo Emerson's poem, "The Problem"—but this is not foreign architecture in the present sense though the poem penetrates deeply the relation of architecture and sacerdotalism to life and religion.



A Derrick House *From "Architekten"*

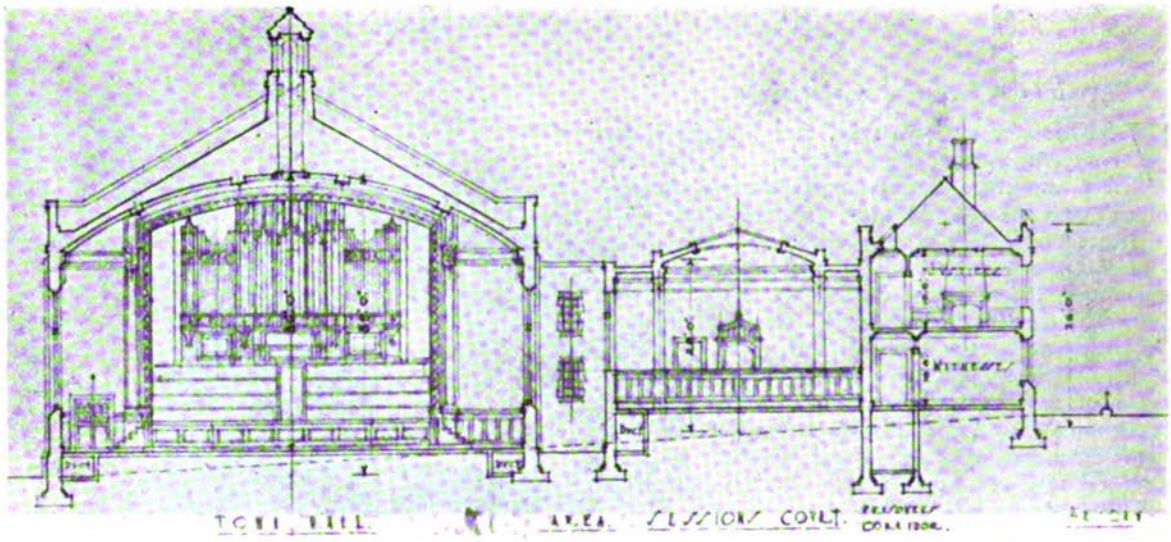


The Marlborough Hotel Winnipeg *From "Construction"*

A Scheme of Non-arrangement

In displaying my garnered treasures for your inspection I shall not endeavor to arrange them in geographical sequence or group the offerings of any single country by themselves; but, where objects can be connected by even the merest thread of thought, I shall place them in juxtaposition; as, for instance, a hotel in Winnipeg, from *Construction,* Toronto, Canada, and a derrick house from *Architekten,* Copenhagen. The thing which connects these two buildings in my mind is the relation of the base to the topping-out. If an example of the mechanical and the æsthetic in combination more grotesque than is this Danish specimen has ever been offered, it has not come into my limited range of vision. The mechanical contrivance is abominable even for that sort of thing; while the æsthetics of the substructure is wasted. But let the illustration tell the story of discord and inharmonious scale. In this instance a tale of divorce would be wholesome reading at the breakfast table—the marriage should never have been consummated, nor even chronicled. As for the hotel, it displays a decided inversion of the principle of growth and development—it is growing its hirsute appendage on its shins, while but a fringe adorns its crown. That thin fringe, however, is the one thing which relates the top to the base. The eight stories in between

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DUDLEY MEMORIAL COMPETITION: FIRST PREMIATED DESIGN
W. ALEXANDER HARVEY AND H. GRAHAM WICKS, F. AND A.R.I.B.A., *Architects*

From "The Architects' Journal"

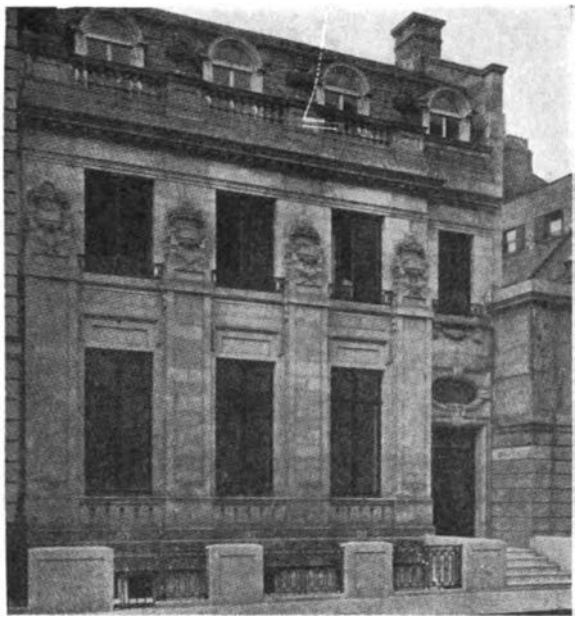
are having a merry four-cornered war among themselves. But I am introducing this example not so much because it is so inharmonious within itself as because it calls attention in its unfortunate way to a perfectly proper principle which many designers think should rule in our cities in this day, when buildings are becoming so tall in relation to the width of the streets on which they stand. Ornament at the top of a high building cannot be seen to advantage and so, many designers think, should be eliminated from the upper portions and confined to the lower. The solution will be reached, to their minds, by an upward diminution of the scale of the members, thus lightening and refining the mass as the building ascends, meanwhile modifying the heaviness of the base by the use of appropriate and appropriately considered ornament. In so far as scale is concerned the Winnipeg example is standing on its head. In the Danish example the derrick stands on the head of an unbraced and unprepared building. . . . The sunlight without is getting more beautiful and brilliant, while the air is getting more balmy!

Competitions and Such

Competitions galore are going on in England and on the Continent, especially in Germany; some of them evidently have come to fruition while others, we may devoutly hope, never will. The one from England which attracts my attention is that for the Dudley Memorial, won by Messrs. W. Alexander Harvey, F.R.I.B.A., and H. Graham Wicks, M.C., A.R.I.B.A.—attractive looking chaps both; for portrait reproductions are presented, as is the case with the winners of most British competitions nowadays. *The Architects' Journal,* London, reproduces the drawings and supplements with editorial comment the findings of the assessor, Mr. Curtis Green. The location, it seems, demanded Gothic treatment of a sort, which the winning design evidently got. I quote: "The assessor says in his report that the general standard of excellence is not quite so high as might have been expected. We are bound to agree with him entirely. Of the 55 sets of drawings sent in, a very low percentage show that appreciation of the Gothic tradition which we have a right to expect in a country the architectural distinction of which rests almost solely upon its examples of Gothic work. (And this in the land of Wren! I.K.P.) A composition such as was expected as a result of this competition could have been found over and over again in the collegiate work at Oxford or Cambridge. Many of the designs give the impression that the authors never in their lives sat down to sketch a Gothic building. The adjoining buildings . . . at least had breadth. In many of the designs this great quality is frittered away in useless and niggling detail. This may be the result of the classic training now given in the schools, or of the growing American influence." Now, when I scanned my last batch of British technical journals they were big with the praise of that feature of American work—the bigness, the breadth, the simplicity; and these features were welcomed and publicly acclaimed; let us not forget "Bush House." Why this sudden change of attitude? Has American criticism of this latter work been felt? There is evidence that the British design of the present and more recent past has been affected by the schools and school methods; and to my mind not for the better.

Just here let me quote Mr. C. H. Reilly in this same journal under date of 6 February. And here again we Americans get another friendly little "swat" which, let us hope, is undeserved. Mr. Reilly is discussing the question of the R.I.B.A. Prizes. "These competitions in schools," he says, "put unfair strain on every one, on the physique of the students who feel that they have the honor of their school at heart and stay up all night to maintain it, and on the morality of the teachers, whose hands and brains itch to help. Besides in a school the teachers are there to help—that is what they are paid for—yet, while these inter-school competitions are being done they have to stand aside and see their best men making mistakes. It is almost more than human nature can withstand, with the result that one hears of whole

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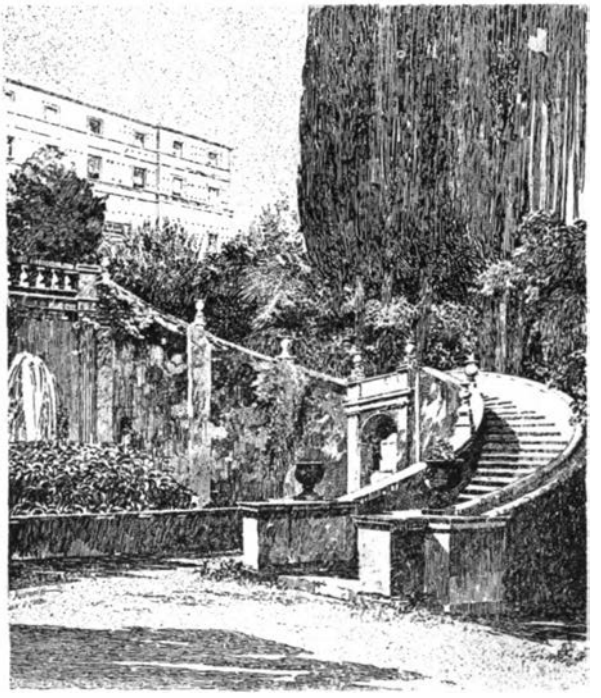
From "The Architects' Journal"
A New London Town House
Sydney Tatchall, F.R.I.B.A., *Architect*

renderings done in the Victory Scholarship by instructors. . . . We might buy a special renderer like certain American schools do, in which case the Institute might have to inaugurate a system of transfer fees for instructors like the Football Association." I am in accord with Mr. Reilly's position—but I don't like his use of "like"; it's a sloppy note in the "rendering," that is, presentation, of a highly moral theme. But back to the Dudley Memorial.

As Between Efficiency and Beauty

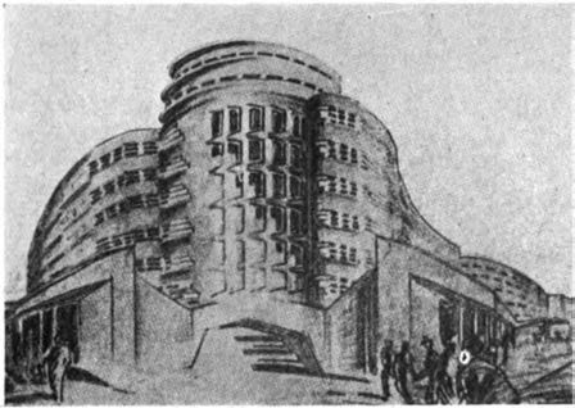
I do not know that I would have given the winning design more than the least cursory glance, with its hard blocky external features, had I not read the report and the aforementioned editorial comment and noted that the prize was given almost wholly on the merits of a plan which was supposed to function for safety. There should have been no plan submitted which functioned less for safety than does this one. With the exception of one opening mid-length of a side aisle I hardly see what less could be done. The notable feature in the design is the lack of unity of style throughout the structure as indicated by the sections. No Gothic of any sort seeps into the interior. The editor's comment on the design placed second throws light on the modern attitude toward architecture. It is this: "No. 3, by Messrs. Stockdale, Harrison and Sons, and Geo. Nott, of Leicester, has been awarded the second place. It is undoubtedly the best elevation submitted. How far an assessor is justified in depending wholly upon the plan in his decision need not here be discussed, but there must have been a great temptation to overlook certain practical requirements in planning in which this design falls behind that placed first. It is certain that had it obtained the first place, Dudley would have possessed a building of singular beauty."

Poor Dudley! Poor Dudley! Forced to look eternally on a commonplace object which is practicable, and cannot



Villa D'Este *From "El Arquitecto"*
Drawn by N. Max Dunning

be made beautiful, when it might have feasted its everlasting eyes on a "building of singular beauty" which, if not entirely practicable in the sketch, might in all probability have been made so in the materialization. My contention, though it may be unwarranted, is that one who misses beauty in his effort to achieve efficiency can never capture that elusive, evanescent spirit; while one who has beauty at beck and call can induce that lovely sprite to dwell in a temple which is made practicable. And the attitude of the time? It is all for efficiency, materialistic efficiency—and let beauty go hang.



Competition for Office and Business Building—Königsberg *From "Wasmuths"*
Hans Scharoun, *Architect*

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HARBOR PLACE WITH FIREHOUSE AND STOREHOUSE — *From "Architekten"*

Continental Competitions

Perhaps it is, in a measure, different in Holland and Germany. *Wasmuths Monatshefte fur Baukunst,* Berlin, presents numerous designs submitted in a competition for a Hotel and Business Premises in Königsberg. A number of these are sane and in the best of the pre-war German spirit; but some have gone wild in the line of the new "plastic" (which is really cast-iron) expression. As they will reproduce, I shall present them to your view. *Bau Rundschau,* Hamburg, presents designs offered in a competition for the German Museum of Hygiene at Dresden. Some of these designs would stand up well with much of our more monumental classical architecture, both in breadth and directness, while in composition of the larger masses some would seem to exceed ours in interest.

In all of these German periodicals is displayed an economic recklessness and extravagance which characterize the acts of much of the present German population. Money is thrown to the winds in buildings as in all forms of amusement; in fact among certain classes building seems to be simply an amusement, which takes the form of building trivial ideas and unworthy ideals into well-nigh imperishable structures. Perhaps if America or England were to indulge in these orgies of extravagance Germany might come to the financial aid of their starving children. But there is a brighter side. Munich has built a really attractive, picturesque and palatial Police Headquarters, which is presented in a series of well-printed plates in the September, 1923, issue of *Der Baumeister,* Munich, which is just to hand.



SURF ON ROCKS BELOW "COUCHERON'S BASTION" — *From "Architekten"*

From Any- and Everywhere

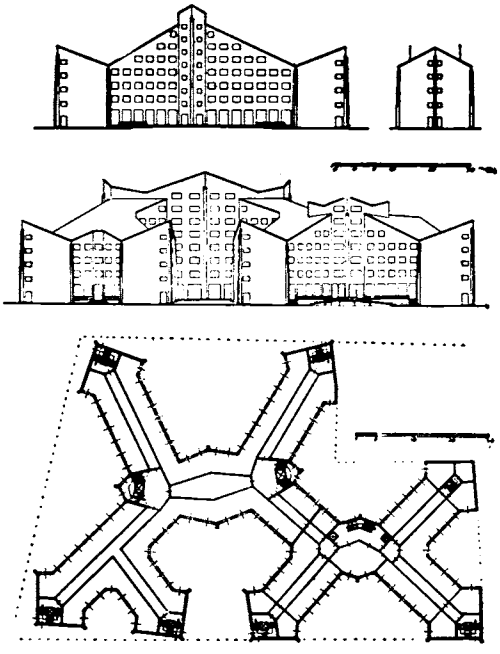
El Arquitecto, Buenos Aires, illustrates some interesting bits of Spanish craftsmanship in the way of wooden doors and ceilings and stone mantels. This in one number. In another I find reproduced a drawing of the Villa D'Este, from the pen of N. Max Dunning, which makes me feel at home though source and subject are so far away. *L'Architecture,* Paris, has an appreciative and well-illustrated article on Bentley's Westminster Cathedral, than the bald common brick interior of which I have seen no more impressive enclosure. I dread seeing the brick



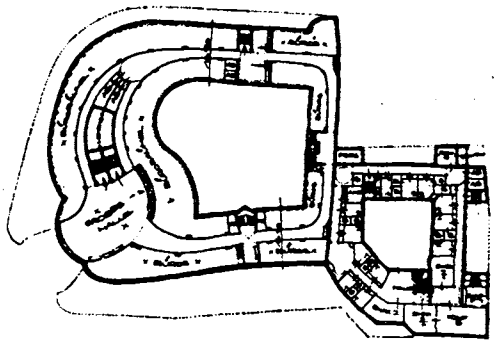
A LITTLE TOWER — *From "Architekten"*

covered with an incrustation of mosaic, however beautiful. Sound waves perform queer antics in some auditoria. Mr. G. A. Sutherland, M.A., translates them into a pattern of birdseye maple veneering in his article on the Acoustic Demands in Auditorium Design, in *The Architects' Journal.* It suggests to me the idea of treating the circumambient atmosphere with a process, other than tobacco smoke or dust, which shall render the air currents visible and colorful and then turning on the voice or the organ and so economically decorating the auditorium anew with each number in the programme. Worse schemes have been tried, I ween. And imagine how the echoes would vary the design!

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COMPETITION FOR AN OFFICE BUILDING AND HOTEL—KÖENIGSBERG
H. SOEDER, *Architect*
From "Wasmuths"



COMPETITION FOR AN OFFICE AND BUSINESS BUILDING—KÖNIGSBERG
HANS SCHAROUN, *Architect*
From "Wasmuths"

Something malign is getting in on British domestic design; something German in spirit and French in detail and execution. I should be better satisfied with something more human and tender; something smacking more of the British soil. But then I am only an alien—not a native made newly rich by the fortunes, or misfortunes, of war. See how this Danish stuff from *Architekten*, Copenhagen, smacks of nature, and art in nature. That coast scene is not from a painting—it is real. The British architectural press is full of good reading matter and interesting illustrations. There are Percy Nobb's articles on Canadian Architecture in *The Journal of the R.I.B.A.;* and Robertson on The Principles of Architectural Composition; and Trystan Edward's Obituary on Regent Street; and the good stuff which always appears in *Architecture*; and correspondence, enlightening and otherwise, on Academic Dress, on the New Art Commission, on Sash and Casement, on almost everything appertaining to the profession. On all this and more I should like to comment—but my space is filled, the sunlight long since has vanished from the sky, and the birds have gone to rest.

IRVING K. POND

Paris Letter

IN THE architectural world, attention has of late been drawn to the facility with which some men call themselves architects. In France, as it happens, the profession is completely open. What distinguishes the architect from the builder is this: he not only possesses technical and artistic knowledge, but is not a business man, and has no wish to be. He earns his living solely through the fees paid him by his clients. This usage, scrupulously observed among the members of our large Societies, has created public confidence in the word architect.

But what a temptation for the conscienceless business-hunter! He calls himself an architect and, not being restrained by the ordinary rules of fair play among confrères, never fails to find plenty of clients.

In the devastated regions, the Government has had to check this evil at its source, for the poor peasants whose homes had been destroyed were an easy prey. It was decided to require a form of certificate for those who wished to practice in these territories, and as a result a competition was necessary.

But in the rest of France we have begun to observe the same danger. Here too the large Societies, acting with the Government, are seeking to determine upon the minimum conditions, at least, which may be demanded of those who wish to practice. It is out of the question to demand that everyone hold a diploma given by the Government in the Ecole des Beaux Arts, which will always be a kind of distinguishing mark. Moreover, the cases of those men who have practiced creditably for a long time merit consideration.

It now appears that the present agitation will end with a simplified examination and a sufficient probationary term with architects who themselves have practiced for many years. But beyond that, and for those who would be called architects, all men should be asked to promise adherence to the "code of the architect's professional duties," called the Code Gaudet, after the venerable maître who drew it up, and long ago adopted by all the architectural societies worthy of the name.

Certain it is that without harming those who wish to become architects without passing through the official schools, the adoption of a regulation covering the entire profession will contribute to the progress of architecture.

But architecture has other enemies than the pseudo-architects! Time—aided by the dreadful smokes and gases which befoul the atmosphere of a modern city—

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are attacking our precious ancient monuments, and it is only through unceasing sacrifice that we are able to preserve them. Our confrères in the New World can scarcely yet have come upon such annoyances, but at the same time they have not the pleasure of living in the midst of the old timbered houses, tall columns, the huge naves, the picturesque roofs which dominate the French cities and towns. Imagine the joy of the discoverer who, from some difficult and inaccessible vantage, views some fragile piece of work, some bit of exquisite sculpture perhaps unseen since its designer laid down his tools centuries before. Sometimes, too, one may find a half-completed work—the artist has gone—one can think that he will return.

To return, we were speaking of the smoke fumes which are disintegrating the stonework of Paris: the other day I was told of a pinnacle of the Sainte Chapelle, which, after 700 years, had to be replaced 60 years ago; but since that first restoration, the work has had to be done over again three times. The sulphurous gases in the coal smoke of the city will continually cause such casualties. There is another destructive element but recently revealed: the vibrations due to the passage of heavy camions, buses, and the tramway and *Metropolitain* traffic. Many buildings, old as well as new, are showing the effects of these disturbances, such as fissures which are accentuated from day to day. Fragments of stone with the slightest flaw loosen and fall. This is especially noticeable among those gargoyles whose bold projections are a characteristic of the outlines of the Middle Age and early Renaissance churches. In the church of St. Eustache, which—among others—is situated near the Halles in Paris, at the angle of a crossing where a great number of heavy vehicles pass, one of these gargoyles became detached and in falling unfortunately destroyed another gargoyle, the sculpture of which was unusually interesting.

Standing upon a scaffolding erected near one of these gargoyles and touching lightly, with a finger, the extremity of that bar of stone, some five or six feet in length, one feels the solid matter vibrate like a tuning-fork when heavy traffic passes rapidly below. Until the law requires motor camions to be equipped with pneumatic tires, precautions against a wholesale destruction of these architectural relics of another age must be taken. Against the inside of each gargoyle, and running through its canal, an iron bar has been placed, cemented firmly to the stone and further anchored with three or four bands of copper, all of which is then covered with lead. Even in full daylight the general appearance of the gargoyle is very nearly the same. Such strengthening is made possible by the fact that rain-water no longer passes through the gargoyles, but is led from the roofs by a more modern system of canals.

One may realize from this what heroic measures are necessary to maintain these ancient monuments, and how costly is the honor of possessing such masterpieces in a city such as Paris. Their present situation is aggravated through the necessitated abandonment of restoration work during the war years.

But today many of these structures are partly covered with scaffolding, and it is to be hoped that the greater part of this work will be finished in 1925, so that visitors who come to the Exposition des Arts Décoratifs will be able to study our monuments with freedom. This Exposition, by the way, promises much of interest. Outside the ordinary run of things which one will find in such an exhibition, the "ensembles" which the organizers of the affair have tried to encourage are expectantly awaited. These "ensembles" will be undertakings conceived by an architect, as director, and executed by a group of artisans under him: each man, however, having all the liberty of conception compatible with the work as a whole, and working in his own name. Pavilions will be erected in this way, most of them with a well-defined object in view.

All the various groups which have no definite aim have been advised to take as themes one or another of the different elements of a village, so that when the pavilions are combined they will form a small town the elements of which—at least one hopes—could be used afterwards in building the new villages, in the devastated regions, for instance.

In fine, the decorative art will again attain the place among the other arts which it should never have relinquished: it will be restored to close relationship and harmony with architecture. Although for a long time it had been thought quite enough to accumulate "ornaments" to "decorate," we have today returned to that sane conception that it is necessary to carry the effort of decoration only to give the proper relationship and value of the essential elements. This effect should be obtained only through a decorative scheme which inspires objects and ideas in harmony with the design of the building, the hall or the room to be decorated. These are the principles which all the primitives applied without realizing the fact and upon which the Exposition proposes to cast light. We hope that it will succeed in attaining its goal.

G. F. SERBILLE

The Wren Society

The object of the Wren Society is to elucidate the career and achievements of the great architect, whose bicentenary has just been celebrated with such universal interest, by the searching out and publication of original drawings, documents and facts of proved authenticity relating to his life and works.

It is proposed to issue to the members an annual publication which will be either a portfolio of reproductions of Wren original drawings or a volume of hitherto unpublished records relating to Wren and his work.

The subscription to the Society will be one guinea. The Publications of the Society will be supplied free to members and will not be obtainable through trade channels, but additional copies may be purchased by members.

Members may pay a Life Composition fee of fifteen guineas, which will in the case of libraries and institutions cover a period of twenty years, beyond which it is contemplated that the Society shall not continue.

Subscriptions for membership may be sent to the office of the JOURNAL.

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Louis H. Sullivan

Died 14 April, 1924

DESPITE the fact that Louis Sullivan failed to write himself in an arresting way on the skyline of any of our cities; that he has left no masterpiece at which his devotees might gather, as at a shrine; and though the promise of his earlier work was not fulfilled in later years, the profession of architecture has nevertheless lost, by his death, its most compelling and luminous figure.

He was this by reason of the strength and steadiness of his spiritual perceptions, and the dynamic character of his thought, which fertilized and made fruitful in new ways the minds of those with whom he came in contact, as also —through the broadcasting power of the printed page—it has stirred and will go on stirring the Open-Minded to that manner of clairvoyance, that testing and transvaluation of values, in which all Newness has its origin.

Making his appearance in the architectural firmament in the place and at the moment where and when the structural method was undergoing the most profound change which it had undergone in centuries—when the steel frame and the elevator had made possible the skycraper—Mr. Sullivan was among the first to realize how profoundly the substitution of steel struts for masonry walls would affect architectural design, and he was *the* first to "dramatize" the new structural method in any authoritative and eloquent way.

To Mr. Sullivan the skycraper spelled opportunity, and not—as to the architect enchanted by precedent—frustration. Its verticality, so far from being an embarassment, was an inspiration, and he made of the Prudential building, in Buffalo—the finest of the all too few incarnations of his idea—"a proud and soaring thing," without a dissenting line from bottom to top, and with the metallic structure palpably felt through its envelope of baked clay. In later life opportunity knocked at his door less and less frequently, and he never transcended this success, but the later development by others of the steel-framed office building, in its finer manifestations, has been along the lines which he laid down.

These later manifestations, however excellent, lack Mr. Sullivan's highly original and individual touch, most clearly manifest in the character of his ornament, to which, since it fails of classification in any existing category, the name of "Sullivanesque" has been applied. This ornament establishes for him another claim to distinction, so beautiful is it—like flowers wedded to snowflakes—so individual, and in the best sense original.

But it is as a spiritual and intellectual force that Mr. Sullivan will be best and longest remembered. He was the revealer of architectural hypocrisies and shams, the prophet and (let us hope) the precursor of a better order. We shall do best to think of him as a pathfinder and pioneer, for he had their characteristic qualities of faith, vision, courage, single-mindedness, self-reliance, as well as the defect of this last-named attribute: a certain intensification of the sense of self, scarcely native to his kindly and truly lovable spirit, but imposed on him from without, as it were, by reason of the fact that the forest he was called upon to clear was of such monstrous growth, and the lurking enemies so powerful and savage.

It is good to know and pleasant to remember that he lived just long enough to see his autobiography in print, a palpable assurance that the travail of his spirit had not been in vain, but that its record would be a perennial inspiration to ardent and high-spirited youth—always his self-elected following. Turning the pages of his book with feeble fingers, Death already just outside the door, well might he have said, fronting that despot of our days,

"This grave shall have a living monument!"

CLAUDE BRAGDON.

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Bertram Grosvenor Goodhue

Elected to the Institute in 1901
Elected to Fellowship in 1906
Died at New York City, 24 April, 1924

FROM the time, thirty or thirty-five years ago, when with his facile pencil he gave us that figment of his imagination, a wonderful, mythical, mediæval city in Europe, until the last, Bertram Goodhue always showed himself to be, above all else, a creative artist. It mattered not if it were an alphabet, a bit of embroidery for an altar cloth, a building or a great group of buildings, that which Goodhue designed was always beautiful and characteristically Goodhue. To few men has been given that wide adaptability and gamut of the sense of creative design which enabled Goodhue to vivify a group of letters with a beauty unexcelled in modern type design, to imbue marble with all that made Gothic beautiful as he did in the reredos of St. Thomas', and at the same time to visualize the big splendor of the San Diego Exposition, the Baltimore Cathedral or the capitol at Lincoln, Nebraska.

Goodhue has been called a master of Spanish Colonial, a master of Gothic, a master of mass composition, but rather let it be said that he become the master of everything he essayed in creative art, and he essayed many things. And let it be remembered that his Spanish and his Gothic were not merely archæological Spanish and Gothic depending on the familiar, traditional vestures of these styles for character. They were created with the soul and in the spirit of Spanish Colonial or Gothic, and were always placed where they belonged and so that they seemed to be of the soil.

Intensely individual and temperamental, Goodhue was yet magnanimous and broad-minded. The narthex of the new Saint Bartholomew's is the rebuilt porch of the old church, designed by Stanford White. Many an architect would have submerged it, but with what loving devotion and regard for its worth, with what modest subduing of his own work, has Goodhue woven this porch into the fabric of his own design!

Bertram Goodhue accomplished much and left the world richer and more beautiful for having lived and worked in it. Always a rational iconoclast, always growing, every new thing he did was fresher and better than the last, and he had just reached that ripeness of experience when he seemed ready to forsake the last lingering tendencies to follow tradition, ready to create out of that vision and imagination which scholarly regard for tradition had ripened and matured, and with his profound sense of beauty and the fitness of things as a guide, when his earthly career was ended with a suddenness the shock of which will remain for many a day.

Goodhue was always proud of the little Chapel of the Intercession, with its gilded and painted timber ceiling, all so Gothic and yet so much of Goodhue, and it was particularly fitting that within the walls of this chapel, beneath that gilded ceiling, amid the beauty which he had created, he was laid for his friends to bid him the last farewell.

B. J. L.

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The Secretary's Page

28. The Fifty-Seventh Annual Convention of the American Institute of Architects. Surely that should make every member of the Institute sit up and take notice. The Secretary desires to bring home to you the fact that this coming Convention has great possibilities. Study the program, which you will have received by now, then come to the Convention to lend your advice and knowledge to the discussions which are sure to take place. Every Chapter should be represented, and by a full delegation if possible. The special sessions as given on the program will be worth coming a long way to hear, but the Secretary wants to call your particular attention to two words which keep appearing all the way through the program: "Institute Business." Of course, you will say, the Secretary is interested in those two words because of his job, but let him suggest that what is to come under those two words at this Convention is of the very greatest interest to every member of the Institute, to say nothing of other architects and those affected by the practice of architecture.

Do you approve of the amendment touching the dues of the Institute? It simply means that if you don't pay your annual dues by the 31st of January you will have to pay an additional five dollars for the privilege of the delay.

Are you interested in the question of Fellowship in the Institute? If so, it would be well for you to study the amendment proposed and be prepared to act thereon.

Are you interested in the question of competitions? There is a proposal to be offered that each Chapter have a certain degree of autonomy in this vital question. It is important that a careful decision be made on this.

Are you interested in some of the very vital questions brought out by the Committee on Architectural Relations? They affect you, and your thought on the matter ought to be considered. You won't get consideration if you don't make it possible for such consideration to be given you.

And there are innumerable other important things which will come up, and this is the yearly opportunity for all the Chapters and for all individual members to have their say.

And finally, you will have an opportunity to see the Octagon, with its new fitments, made possible by the Allied Architects' Association of Los Angeles, and a most exceptional opportunity to see the Bureau of Standards under special auspices.

29. The Chapter Secretaries are just about holding their own. The Secretary has copies of minutes from BALTIMORE, NEW YORK, CENTRAL ILLINOIS, PROVIDENCE, CHICAGO, MINNESOTA, GEORGIA, UTAH, KANSAS CITY, and WASHINGTON, D.C., ten in all. The Secretary's job of reading the minutes is being made very easy for him, isn't it?

KANSAS CITY is to conduct a competition among Institute members for a design for a Chapter seal to be used in stamping blueprints and specifications, the seals to remain the property of the Chapter and to be loaned to members for use with the right of recall by the Executive Committee. It is making inquiry of the Octagon as to whether such an idea will be in accordance with Institute procedure; while the secretary is unable to answer that at this time, it will undoubtedly be taken up by the Board. KANSAS CITY has appointed a large Entertainment Committee, with two members to be responsible for the conduct of each meeting, and is taking further steps to get in touch with the various civic organizations.

Irregular Curves, from UTAH, is again with the Secretary, who wishes he had space to quote at length, and cannot resist one sentence, "Your Institute is serving you well but only as she knows your Chapter. Your Chapter is now daily promoting your interests and is serving you in the measure of the service that you render unto her."

NEW YORK's annual dinner must have been delightful, and the Secretary wishes he could have been present. NEW YORK can do such things in a big way.

MINNESOTA reports a most interesting and thorough test on the qualities of certain insulating lumber at the University of Minnesota, directed and supervised by the Chapter Committee on Materials and Methods, and the appointment of Committee to act with a Committee from the Civil Engineers on establishing standards for construction of school houses in Minnesota.

BALTIMORE is showing great interest and activity in city and civic problems.

The Executive Committee of the CHICAGO CHAPTER has given its sanction and co-operation to the Home Building Demonstration conducted by the *Daily News*, which is erecting three small houses under the general direction of the Architects' Small House Service Bureau of the United States. An appointee of the Chapter is supervising the construction. CHICAGO is taking its usual enthusiastic position in all things relating to the city, state and country.

RHODE ISLAND is offering an annual prize of $140 to an architectural student of the Rhode Island School of Design to enable him to travel to New York, Philadelphia and Washington. RHODE ISLAND is actively interested in civic matters and very strongly in the question of competitions, especially in school matters. The Secretary is much impressed by the scope and interest of the RHODE ISLAND CHAPTER meeting.

30. Just a word or two about Competitions. Recently an irregular competition was instituted in the territory of a Chapter contiguous to that of its neighboring Chapter, and the Secretaries corresponded in the endeavor to secure fair play in the others' territory. This brought out the thought of having information on undesirable competitions published in the JOURNAL, much as it is in the *Journal of the R. I. B. A.* The Secretary is authorized to say for the Chairman of the Institute Committee on Competitions that, wishing to divest the procedure of as much red tape as possible, he would be very glad if any member knowing of an irregular competition would write direct to the JOURNAL and let the news, if authentic, be published therein for the general information of the membership. Probably such information will come too late, and most irregular competitions are indulged in by circles of architects who never tell about them. So

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they are often not found at all unless some conscientious practitioner is invited to take part. And usually he simply declines to participate and neglects or forgets to notify anybody. The idea is worthy of discussion. Perhaps some publicity may help.

31. A long letter from Mr. Gerhard Hoehne, architect of Baden-Baden, Germany, and member of the Bund Deutscher Architekten, came to the Institute. Action was taken upon the many requests as shown in the report of the Executive Committee at the New Orleans meeting. Mr. Boehne's final request for contributions of a general nature to be sent through the Committee for relief of German intellectuals was referred to the Secretary. The Secretary, therefore, calls it to the general attention of the Institute with the suggestion that each member act as his judgment dictates.

32. To Chapter Secretaries: Harry L. Shupe, Secretary of the CLEVELAND CHAPTER, has made a most valuable suggestion and one that appeals to the Secretary—a conference of Chapter Secretaries. Why not? Much could come of it. Unfortunately no place can be assigned for such a thing in the regular program of the Convention. As the Secretary of the Institute would like to be present at such a meeting, a pre-convention would be out of the question, for he will have his hands full for several days preceding the Convention. He sees no reason, however, why a luncheon or dinner meeting of the secretaries should not be held during the Convention, and with the cordial assent of the Executive Secretary, offers the service of the Octagon Office for making the necessary arrangements. This means, of course, that all the Secretaries should come to the Convention.

Please don't forget that all official communications to the Secretary should be addressed to him at the Octagon House, Washington, D. C. EDWIN H. BROWN.

Pre-Convention Notes

Up to the moment of going to press the following nominations have been received:

FOR President, N. Max Dunning of Chicago has been nominated by members of the following chapters:

MONTANA: G. H. Carsley, Chandler C. Cohagen, W. R. Plew, Fred F. Willson, Geo. H. Shanley, R. C. Hugenin.

UTAH: Miles E. Miller, John Fetzer, Lewis T. Cannon, Taylor Woolley, Clifford Evans, Georgius Y. Cannon, A. O. Treganza, Hyrum Pope, Harold W. Burton, Leslie S. Hodgson, Myrl A. McClenahan, Eber F. Piers, Burton E. Morse.

FOR President, D. Everett Waid, of New York City, has been nominated by members of the following chapters:

BUFFALO: Louis Greenstein, Albert H. Hopkins, Karl G. Schmill, Frank A. Spangenberg, H. A. Fruauff, Lawrence H. Bley, Duane Lyman, Paul H. Harbach, H. O. Holland, Ernest Crimi, Chas. S. Wood, Harvey S. Horton, James Walker, R. C. Fayfield, F. J. Kidd, August C. Esenwein, Harry F. Hudson, Aaron R. Merritt, Olaf W. Shelgren, Jas. A. Johnson, Fred R. Hopkins, Paul F. Mann, Wm. C. Lurkey, Edw. B. Green, Edw. B. Green, Jr., Benning C. Buell, Jos. J. W. Bradley, Norton Kirkpatrick, Will A. Cannon, Simon Larke.

CENTRAL NEW YORK: Edwin S. Gordon, Wm. G. Kaelber, John W. Vickery, J. F. Warner, Leon Stern.

CHICAGO: D. H. Burnham.

WISCONSIN: Thos. L. Rose, R. C. Kirchoff, Geo. A. Kemnitz, Chas. L. Lesser, Henry G. Lotter, Paul Marzillier, Fitzhugh Scott, MacDonald Mayer, Urban F. Peacock, Walter F. Neumann, Peter Brust, Richard Phillip, Perce G. Schley, Chas. W. Valentine, Walter W. Judell, Harry W. Bogner, Alexander C. Guth, Carl Barkhausen, Alfred C. Clas, John S. Shepherd, G. J. deGelleke, H. J. Van Ryn, Leon M. Gurda, Cornelius Leenhouts, Hugh W. Guthrie, E. O. Kuenzli, Wm. G. Herbt, Henry C. Hengels, Stanley F. Kadow.

For First Vice-President, Edwin Bergstrom, of Los Angeles, has been nominated by members of the following chapters:

SAN FRANCISCO: Merritt J. Reid, Jas. W. Reid, Harry Blohme, Geo. A. Applegarth, Lewis P. Hobart, Geo. H. Howard, Albert Farr, Houghton Sawyer, Henry H. Myers, Clarence R. Ward, J. S. Fairweather, Ernest Coxhead, Fred H. Meyer, G. A. Lansburgh, Geo. W. Kelham, John Reid, Jr., Walter D. Bliss, John Bakewell, Jr., Wm. C. Hays, John G. Howard, John A. Baur.

SOUTHERN CALIFORNIA: A. C. Zimmerman, Myron Hunt, H. C. Chambers, David C. Allison, J. E. Allison, John P. Krempel, Walter E. Erkes, Reginald D. Johnson, S. R. Burns, Sumner Hunt, David Witmer, W. A. O. Munsell.

FOR Regional Director of the Fourth District, Nat Gaillard Walker, of Rock Hill, S. C., has been nominated by members of the following chapters:

NORTH CAROLINA: Harry Barton, Raleigh J. Hughes.

SOUTH CAROLINA: Fred Deal, J. J. Baldwin, Geo. E. LaFaye, Henry D. Harrall, Chas. C. Wilson, Rudolph E. Lee, Robt. S. LaFaye, J. Frank Collins, J. H. Casey, C. W. Fant, J. D. Newcomer, Rex G. Fuller, Saml. Lapham, Jr., Albert Simons, David B. Hyer, A. D. Gilchrist.

For Regional Director of the Seventh District, William J. Sayward, of Atlanta, Ga., has been nominated by members of the following chapters:

GEORGIA: F. D. Burge, Warren C. Powell, Chas. E. Choate, Francis P. Smith, Wm. P. Bealer, O. C. Poundstone, Albert A. Chadwick, Ernest D. Ivey, C. E. Frazier, Arthur N. Robinson, W. A. Edwards, R. S. Pringle, Rudolph S. Adler, Preston S. Stevens, H. C. McLaughlin.

SOUTH CAROLINA: J. D. Newcomer.

WASHINGTON STATE: Chas. H. Alden, W. G. Brust, Carl Siebrand, Sherwood D. Ford, Jas. H. Schack, Andrew Willatsen, Arthur L. Loveless, David J. Myers, Harlan Thomas, Daniel R. Huntington, Carl F. Gould, Chas. H. Bebb, Paul Richardson, Jos. Wade Wilson, A. H. Albertson, Louis Baeder, Frank L. Baker.

These nominations are in addition to those published in the two preceding issues of the JOURNAL.

Industrial Relations

One of the best groups organized by members of the Committee on Industrial Relations on the basis of the "Congress" idea is the admirable association formed in Portland two years ago. Ellis F. Lawrence, member of the Committee, has reported the progress made during the last year in the following interesting statement:

"The outstanding achievement of the Oregon Association of Building and Construction continues to be the

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Guild of Handicrafts, in which master mechanics have been installed in public ceremonies attended by as many as 250 people. These mechanics are selected for their skill in their crafts, and for the outstanding qualities of character. They are thus honored by the entire building industry. Officials of the State, *i. e.*, the Secretary of Public Education and the Secretary of State, have participated in the ceremonies of installation, presenting the certificates of Guildmanships, as well as gold buttons, the latter being presented by the State Commission on Vocational Education.

"The Oregon Chapter has entertained the Guildsmen twice, and the Guildsmen have twice returned the compliment by inviting the Chapter to dine with them at the Guild Rooms conducted by the Oregon Association of Building and Construction. Very valuable suggestions have been made to the architects by the Guildsmen, pertaining to practice in specification writing.

"Several Guildsmen have taken teachers' training courses organized by the A. B. C. and the Oregon Commission of Vocational Education and will receive teachers' certificates from the Secretary of Public Education, thus qualifying as teachers of mechanics' classes and of classes for apprentices. Greater efficiency is noted on the jobs, and much interest is shown on the part of the mechanics to qualify. The Guild is strictly an Honorary group—no direct recognition of the Union is made. At least one non-Union man is a Guildsman.

"The Unions are friendly, as far as we can determine. Under the stimulus of this new interest shown in the mechanic, a painter and a plasterer have recently carried on experiments in Sgraffito with promising results—probably the first work of this kind executed in this country.

"There are thirty-two Guildsmen to date, but steps are being taken to reach every worthy mechanic. It is expected that the Guildsmen will be valuable in functioning as father confessors to the apprentices. Although Mr. Boyd's visit to Portland was on a holiday, the 22nd of February, nineteen of the Guildsmen dined with the Chapter—a very good showing, as many of the Guildsmen are working outside of Portland.

"A carefully worked out apprenticeship system has been prepared and has received the approval of the State Commission of Vocational Education, and the Board of Directors of the Oregon A. B. C. It is now being placed before the various groups for their consideration. The system is tied definitely to the State—the above Commission pledging its support to the extent of registration, examining and certifying to efficiency. Their educational director, acting largely under the funds accruing from the Smith-Hughes act, is in general control of the educational portion of the work in the teachers' and mechanics' courses, co-operating with the Guild and Apprentice Committee of the A. B. C.

"Classes for mechanics in carpentry, sheet metal work, plastering, plan reading, etc., are being conducted in class rooms furnished the A. B. C. by the School Board, the teachers being selected by the Educational Directors and the A. B. C. Committee.

"Reed College is co-operating with the Association in making the Seasonal Survey. The Code of Ethics is at present approved by some of the groups, and is being considered by others.

"Considerable public interest has been aroused in the work. The Governor has appointed two directors representing the public—one a former President of the Portland Building Owners' and Managers' Association, the other a cashier of a prominent bank. Another banker has been elected to the Directorate by the Association, also representing the public. Good press articles have been received.

"The Directorate serve as a clearing house for interrelationship problems and complaints. They have, through Committees, been active in car shortage problems, school affairs, building code problems and in policies pertaining to contractual reforms in the conduct of State work.

"The possibilities are great for strengthening the status of the architectural profession—as well as establishing what Mr. Kohn refers to as 'functional consciousness.' The mere privilege of associating socially at the weekly luncheons with representatives from every branch of the industry offers great opportunities for right educational work, and is conducive to creating proper understanding of the problems confronting the various groups.

"It should be stressed that the Oregon A. B. C. is organized on a basis of individual memberships, thus eliminating troubles that might arise from organization representatives. Each member pays $2.00 per year. The membership list contains something over four hundred names. Additional financial support is secured by voluntary subscriptions.

"The endorsement of the Guild idea, as a method of honoring deserving mechanics, by Secretary Hoover and other investigators leads me to recommend that the report of the Committee on Industrial Relations contain a resolution endorsing the movement, and urging the organization of these Guilds throughout the country. This should, of course, carry with it the further endorsement of the Congress idea.

"The publicity material sent out by the Oregon A. B. C. has brought several inquiries, and the writer suggests that this Committee offer its assistance to Mr. John Calvin Stevens of Portland, Maine, who, judging from his letter to the writer, is ready to organize a Congress there.

"The experience of the writer in the Oregon A. B. C. indicates to him that the industry looks to the architect for leadership, because of his professional standing, and that it believes that most reforms can be best started through the architect, and that many of the abuses germinate from inferior architectural practice. With a united industry, these reforms can be made. It certainly is a challenge to Institute men everywhere."

ROBERT D. KOHN.

Announcements

THE Beaux-Arts Institute of Design is raising $40,000 as an endowment of the Paris Prize Memorial Fund, through which it sends annually a student to the Ecole des Beaux-Arts in Paris, paying $2,000 for two years towards his expenses. It is desired to make this prize permanent, and to that end a considerable sum has already been subscribed by architects and other individuals. Contributions should be sent to Henry R. Sedgwick, Treasurer, 522 Fifth Ave., New York City.

The Beaux-Arts Institute, as is a matter of common knowledge, has a large number of students under its auspices. The Paris Prize Fund is a memorial to the late Floyd Warren, who died in 1922.

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The Development of Washington

The reports of further committees of the Washington Committee of One Hundred, under the chairmanship of Mr. Horace Peaslee, are given in brief below. For a general discussion of the development of Washington articles appearing under this same title in the JOURNAL for March and April will prove of interest to the reader. The reports follow:

Housing—Present and Future [1]

There are six outstanding points in the Washington housing situation:

Securing an adequate supply of dwellings for families of moderate or small means. Rehousing alley dwellers. Protecting private residence districts from apartment house invasion. Planning apartment houses so that one will not injure another. Estimating future housing areas and indicating measures of constructive guidance in their development within the District and in Maryland and Virginia. Improving construction so that new dwellings will not unduly deteriorate or costs of repairs and maintenance become excessive.

The housing shortage resulting from the war has of late led to unprecedented building. But the greater part has been for sale or rent to people of means. Little has been done for those who cannot afford $5,000 to $8,000 houses. Apartments have increased enormously. But few one-family dwellings have appeared on the rental market.

For years the vacation of alley dwellings has been sought with measurable progress through laws prohibiting new alley dwellings, and demolition of those unfit for habitation. Thus the number of alley dwellers has been reduced from 16,000 in 1912 to 9,485 in 1920. Dwellings now standing will be inhabited for a generation unless additional steps are taken. A bill (1914) to secure vacation of all remaining alley dwellings within 10 years, and providing for converting the wider alleys into streets, was passed by Congress as a mere mandate that all alley dwellings should be vacated on a certain date. The housing shortage made this impossible of execution. The law in court was interpreted to affect only those few alley dwellings on alleys without sewers or water mains. A new law should provide for conversion of some alleys into streets and gradual vacation of others.

Protecting Private Residence Districts.—There is a legitimate demand for apartment houses, though they render their neighborhoods less desirable for private residences and ultimately drive them out. The city between the Mall, Rock Creek, Calvert St., Columbia Road, Soldiers' Home and North Capitol St., with outlying sections of a few great thoroughfares, should be the proper field for such development; other districts should be reserved for one-family houses. Zoning regulations will be the means of carrying out this proposal.

Another suggestion was that apartment houses be confined to wide streets where automobile parking will not interfere with traffic.

It is the physical, not the social, handicaps which the builder fears from existing houses. These can be eliminated by regulations requiring each building to leave open space necessary to give each building proper light and ventilation from its own property, irrespective of any other buildings built in accord with the building law and zoning regulations, which, it would seem, apparently do not require adequate open spaces, else apartment builders should not hesitate in developing adjoining lots. Recent apartment houses with generous open spaces about them have been studied, as a basis for recommending modification of the zoning regulations and that the building code now being drafted may take cognizance of them.

Recent growth makes it necessary to take account of territory outside the District. That this, and also undeveloped territory in the District, may be advantageously developed, the committee recommends that approved measures for District housing regulation be at once brought to the attention of these States, so that similar regulations may be adopted. The committee suggests an estimate of accessible building land remaining in the metropolitan area.

We are concerned that those who invest in homes shall be satisfied. Our interest is in the distant future. Some improvement in construction practices may be expected from the new building code, but more is to be hoped from the builders. If some houses are shoddily built, and there is no recognized distinction between their builders and the builders of more substantial ones, the public will classify all builders together and look with suspicion on all new dwellings. The effect of this will be evident so soon as the present eager demand decreases.

The committee recommends that representative builders confer upon construction standards, guaranteed perhaps by a trademark.

Zoning [2]

The District is zoned under an Act of Congress (1920). The Zoning Commission consists of the District Commissioner, Officer in Charge of Public Buildings and Grounds of the District, and Superintendent of the Capitol Buildings and Grounds, assuring the protection of the Government's interests.

Before zoning was put into effect opportunity was afforded for expression of views in connection with the proposed zoning. In some cases very little interest was taken. Property owners apparently did not realize the full extent of the Act and its effect on property. After public hearings and careful consideration the Commission made its recommendations in the final maps to be issued covering the use, height, and area districts, to protect not only public buildings and grounds but property owners. A change in regulations may be initiated at any time if so desired.

We urge that the full intent of the Act creating the Commission be carried out when requests come up for changes in the regulations and not allow changes for selfish purposes. How far the zoning laws can go is yet to be determined by the Courts. No attack has been made upon the constitutionality of the law in the District.

Street, Highway and Transit Problems [3]

Washington has a large official population and limited industrial or wholesale business. The residential district has developed mainly north of the retail business section, while government and other offices are largely south of it, so that large numbers of employees cross the busi-

[1] John Ihlder, *chairman;* Dr. Wm. Knowles Cooper, John C. Hoyt, Merle Thorpe, Glenn Brown, Rt. Rev. James E. Freeman, Louis Justement, Charles T. Clagett, Joshua Evans, Jr., John B. Larner.

[2] Harry Blake, *chairman;* Edgar B. Henderson, Gen. Anton Stephan, Appleton P. Clark, Jr., B. F. Saul, Robert H. Young, Mrs. John M. Gries, Louis A. Simon.

[3] A. B. Barber, *chairman;* Albert B. Berry, E. Roger Boyle, Charles Henry Davis, Wm. Phelps Eno, Joshua Evans, Jr., Pyke Johnson, S. M. Johnson, M. W. Lewis, George A. Ricker, Delos Smith, W. W. Spaid, C. W. Stark.

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ness area twice daily; the frequent great National gatherings, involving parades, sightseeing tours, also make abnormal demands on the city's transportation facilities. The city also has the problems of vehicular movement and parking space in the business district.

It is important that adequate highway approaches be developed, and co-operation of the adjacent States is needed to link the approaches with other cities, and with the national highways. There must also be, in the District, adequate parking and other facilities for visitors.

An increasing traffic will depend on the electric and steam railroads and buses. The steam railroads create no serious street traffic problems. The electric railways some time ago reached a condition of widespread extension, even going too far in anticipating further growth, so that some lines have been discontinued. With some exceptions, the tendency is to make all necessary extensions from existing lines by buses. The great problem is to increase facilities on the main lines of dense traffic where service is seriously inadequate during rush-hours and impedes vehicular traffic. Crowding threatens to become constant when more persons live outside the walking range.

The two separate street-railways cause circuitous routing, excessive transfers, and duplication of trackage in some streets. Rerouting would doubtless speed up service and increase the trunk line. Nevertheless, *it may become necessary to place underground the principal lines through the congested district.*

The motor bus appears best adapted to serve many outlying parts and thought should be given to building it in as part of the transportation system.

Washington needs an adequate street and highway system. The development of the present system has been marked by four fairly distinct periods:

1. Up to some 40 or 50 years ago, with the city almost entirely within the Florida Avenue boundary, when the L'Enfant street system met the needs admirably. The excellence of his plan for the area covered is evidenced by the small number of street changes made or seriously considered.

2. A decade or two when the city was growing outside the Florida Ave. limits without adequate planning. The most serious result of this was the failure to project Pennsylvania Ave. (to the northwest), 16th St., and New Hampshire, Vermont and New Jersey Aves. beyond the original plan. 16th St. has since been cut through the Meridian Hill district at great expense.

3. A period beginning in 1893, when under supervision of a highway commission a belated effort was made to extend the L'Enfant Plan over the remainder of the District. New Hampshire Ave. extended was laid out, substantially in line with the Plan, but with a gap of about a mile. The Vermont and New Jersey Ave. arteries were not extended, but other arterial ways, some short and fragmentary, others of considerable length, were laid out or planned, often, however, with gaps disconnecting them from the main avenue system.

Even more serious was the disregard of topography in the new street system. Florida Ave. is in general at the base of a hill, and the relatively level ground south of it lent itself naturally to the rectangular system of the L'Enfant Plan. Outside of the Florida Ave. limits the hilly and broken ground calls for different treatment. Unfortunately the rectangular system has been followed here, resulting in real-estate operations south of Chevy Chase, where trees are being cut off from great areas and hills and ravines leveled as the only practical means of opening up streets in accord with the plan.

4. A recent period with an effort to conform to modern planning ideas, as in Massachusetts Park north of Rock Creek between Connecticut and Massachusetts Aves., where no rigid highway plan had been established, and adjoining parts of Maryland, where the Washington Suburban Sanitary Commission has jurisdiction over all highway and street layouts. This Maryland Commission is laying out secondary streets in keeping with the contour of the ground, and planning connections between the arterial highways in Maryland and in the District. It appears able to offer ready future co-operation.

On the Virginia side, as in the District itself, there is much to be desired in the organization for and present status of the street and highway planning. Immediate reconsideration of the street plans urged, so far as it applies to the many streets not yet opened, with a view to relocating these streets, other than the arteries, in curved lines according to the topography, permitting preservation of the woods, hills and valleys of the District. To continue their present wholesale destruction will rob the city of much natural beauty.

In considering the future development of Washington the influence of the Potomac and adjoining Government lands on both banks, should be considered, as it affects the availability and accessibility of Virginia residential property. There are three highway bridges across the Potomac:

1. Highway Bridge, from 14th St., S. W.—the main route to Alexandria, Mt. Vernon and Richmond, serving a wide, sparsely developed area south of Arlington Cemetery.

2. Francis Scott Key Bridge, from 35th St., Georgetown—about 2½ miles above Highway Bridge, replacing the old Aqueduct Bridge. It serves a wide area of small communities north and west of Arlington Cemetery.

3. Chain Bridge, 3 miles above Key Bridge. too far west to play a large part at present.

A fourth, the Arlington Memorial Bridge,[4] has been under consideration. The topography and location of the bridges make the effective distance from the office district to Virginia somewhat greater than to the north and northwest of Washington.

The residential trend has lately been toward this high ground in the northwest and business has followed.

To the northeast and across the Anacostia River to the east and southeast, the most attractive residential land is farther from the business district than the northwest section.

Rock Creek Park, for much of its length, has an improved driveway which is suited to carry much of the traffic of the congested thoroughfares mentioned. There are various connections between the parkway and these thoroughfares; others are much to be desired. An obstacle is its termination at Zoological Park, two miles from the business district. Plans are prepared for continuing it down Rock Creek to its mouth.

Despite the barrier of the Potomac and adjacent public lands the highlands northwest of Arlington Cemetery will doubtless be increasingly developed for residential purposes if this is overcome. The Key Bridge is now virtually the sole connection. Its usefulness is lessened by the narrowness of M St., Georgetown, which should be widened. Improved connections should be made with Potomac Park, with the upland to the north and with the Conduit Rd. and Chain Bridge routes to the west. There is great need for improving the Virginia Key Bridge approaches. Even so, there will be demand for an additional crossing between the Key and Highway Bridges, such as the Arlington Memorial Bridge.

Two principal through highways seem now needed in Virginia. The one to Richmond merits improvement.

[4] See the JOURNAL for February, 1924.

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The other, extending west to the Shenandoah Valley, is only partly improved.

Again considering the Maryland arterial highways the main thoroughfares to the most rapidly growing residential district, should be protected against throttling down at the retail shopping centers which naturally grow up, and enlarged to accommodate street-railway installations and meet traffic requirements.

There are two Baltimore highways. One, via Georgia Ave. and Olney, is too indirect to carry much traffic. The other, via Rhode Island Ave., Bladensburg and Hyattsville, is direct except for some undesirable turns.

A broad Baltimore-Washington boulevard intermediate between these two is projected by Maryland, to lead from the extreme northern corner of the District, connecting with streets and avenues, including 16th St., not yet opened up at this point. The needed connections should be made.

The Annapolis highway, through Anacostia, is very indirect. A shorter one from the Baltimore road at Bladensburg is planned by Maryland. In this connection New York Ave. should be made a direct independent approach. Separation of passengers and freight on these highways is increasingly necessary.

The arterial roads of the Washington region lack interconnections. There should be at least two belt highways north of the Potomac. One might be a picturesque boulevard following the line of forts in the District, such as considered since the Park Commission report (1902), and favored by the present report on Parks. The other should be entirely in Maryland. In Virginia one belt line along the line of forts would suffice at present. Many highways are too narrow. The limitations on recent corrective work in the District have been largely due to lack of funds. It is hoped the money will be now forthcoming.

Washington is fortunate in its wide streets and avenues. The proportion of roadway, however, is not always suited to traffic needs, as the sidewalks are generally very wide. The roadways can be increased by setting the curb lines back, but only as needed.

Washington has much space for parking cars which, properly laid out, could furnish better facilities. The use of portions of public grounds and vacant lots for parking might be considered. In congested parts the time is near when it may be well to construct storage buildings for cars. For auto tourists who prefer to camp as they go, additional space and facilities should be provided. Such changes would, it is felt, be building on the L'Enfant Plan. The Committee realizes that responsible authorities have been giving the problems all possible attention and that details of a co-ordinated future development must be worked out through continuous technical studies. The needs have outrun provisions for them, and recent appropriations have not permitted thorough study or timely execution of adopted plans. It is urged that these needs be brought to the attention of Congress.

The Sirtscheli-Medresse in Konia

The Sirtscheli-Medresse is one of the most beautiful, and, as regards the history of ceramics, the most interesting building in the Middle Ages in Konia. It was erected during the reign of the Sultan Kai Chosro II and served during 1242-1243 as a school for law students. A richly decorated corridor of stone leads to the court, the brick walls of which are partly in ruins. Three sides of the court are bordered with arcades in back of which are situated the cells formerly occupied by the students. The fourth side opposite the corridor is formed by a deep niche bordered on either side by a square dome-covered room. The niche especially is richly and artistically decorated with faience. The illustration upon the opposite page shows a part of the left façade of the Liwan in the court. The inscriptions intermingled with the decorative friezes show that the faience decorations were made by "Muhammed, Architect of Tus" (Persia), who adds that "such work as this will never again be done in this world."

New Members Elected

(As of 16 March, 1924)

Chas. R. Wait, John T. Whitmore, BOSTON; John J. Wade, BUFFALO; Richard Seaton Gregg, *Peoria,* CENTRAL ILLINOIS; Fred L. Starbuck, *Binghamton*; Isaac V. Van Duzer, *Syracuse,* CENTRAL NEW YORK; Alfred Edgerton Manierre, H. Clyde Miller, Solon L. Reily, Ralph Edw. Stoetzel, Willard Clyde Walker, CHICAGO; Harold Clark McLaughlin, Preston S. Stevens, GEORGIA; Henry E. Crow, Chas. Norton, Jr., Frank L. Proctor, Warren L. Rindge, Kenneth C. Welch, GRAND RAPIDS; Cecil F. Boucher, *Wichita,* KANSAS; Geo. F. Fossum, *Aberdeen, S. D.,* MINNESOTA; Ross E. Goddard, *East Orange;* Wesley Darwin Hunter, *New Rochelle, N. Y.,* NEW JERSEY; G. R. Berryman, *Wilson*; Jas. Robt. Thrower, *Raleigh,* NORTH CAROLINA; Harvey M. King, *Fargo, S. D.*; Geo. Foote Dunham, Chas. Edward Martin, Jamieson Parker, OREGON; Chas. Howatt Biggar, *Bakersfield*; Frederic M. Ashley, Saul Harris Brown, Orville L. Clark, Loyall Farragut Watson, *Los Angeles,* SOUTHERN CALIFORNIA; Benj. Earle Irby, *Beaumont,* SOUTH TEXAS; Reginald V. Arnold, *Bristol, Va.*; Wm. C. Colley, *Nashville,* TENNESSEE; Frederic G. Bates, Chester B. Lee, TOLEDO; Francis Drischler, *Alexandria,* VIRGINIA; Osgood Holmes, Frederick John Ritter, WASHINGTON, D. C.; Francis P. Rooney, *Spokane,* WASHINGTON STATE; Fred S. Jones, *San Antonio,* WEST TEXAS; Alex. H. Bauer, *Milwaukee,* WISCONSIN.

The Le Brun Scholarship Awards

The Problem selected for the 1924 Le Brun Scholarship Competition was based by the committee upon "a practical problem, one which comes under the observation of many communities in various parts of the United States."

A prosperous city of from 100,000 to 150,000 population has voted the funds necessary for the construction of a readjustment centre for military and civilian neuropsychiatric cases to be erected as a War Memorial.

The Centre was to be located on public ground in proximity to a main street which forms one of the boundaries of the building site, where there is a little or no

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THE SIRTSCHELI-MEDRESSE
KONIA
Detail of Faience in the Liwan of the Court

DEPARTMENT OF ARCHITECTURE
The Pennsylvania
State College, Pennsylvania
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grade. The Centre, with approaches, to be confined to a space 190' x 250'.

It was essential that the building be of non-institutional type and cheerful and human in character, a single compact building with or without a court or courts, or a grouping of semi-detached buildings. All portions were to be well lighted and readily accessible from the entrance. It might be one or two stories in height, with the first floor raised but slightly above grade. It was estimated that about 100 men were to be under supervision in this Centre during the daytime only.

The building was to contain a vestibule or foyer, a salesroom, an office for the resident psychiatrist, a small ward of four beds, an office for the director of occupational therapy, an office for the director of social welfare, coat rooms and toilets; work rooms for woodworking, shoe repairing, weaving and dyeing, printing, bookbinding and leather working, jewelry and ornamental metal work, reed and willow furniture, chair caning and repairing, brush and broom making, cement and pottery work, sheet metal work, general auto mechanics, etc.; and coat rooms and toilets.

The following awards were decided upon by the jury[1]:

The Prize, Otto F. Cerny, Cicero, Illinois.

First Mention, Robbins L. Conn, New York.

Second Mention, Charles J. Dornbusch, New York.

Third Mention, Victor Pribil, Woodhaven, L. I.

The Committee was highly gratified at the high standard of ability and draftsmanship shown and the serious and conscientious study and ability indicated in presenting the solutions of the problem. Conditions of the competition require that in making the award the jury give consideration to the records of qualification filed by the competitors as well as to the comparative excellence of the drawings submitted.

The prize winning drawings showed a thorough appreciation of the requirements of the program, as written, as well as those portions of it purposely left to be inferred. The ability of this competitor was clearly apparent in his uniform presentation of a very irregular and picturesque solution in a simple and straightforward manner.

Announcements

NOTICE has come to the Secretary from two cities in the East to the effect that a draftsman, calling himself Harry B. Borden, is soliciting work and asking for an advance against salary because of a wife ill in the hospital. As the experiences of those reporting the incidents do not bear out the representations, architects would do well to bear the occurrences in mind.

F. P. PLATT & BROTHER announce the removal of their offices to 221 West 57th Street, New York City.

MR. J. P. RUSSETT announces the opening of offices at 321 Fleming Building, Des Moines, Iowa.

[1] Charles E. Birge, Electus D. Litchfield, Grosvenor Atterbury, Otto R. Eggers, Milton B. Medary, Jr., and D. Everett Waid.

From Our Book Shelf

A Native Architecture

Information regarding Bermuda usually sifts into this country by way of badly colored postcards sent by the traveler to some of his less fortunate friends. Often we have heard enthusiastic descriptions of its picturesqueness, but Bermuda has remained a remote province to most of us. Therefore, this volume[1] by John S. Humphreys, Associate Professor at Harvard, is a valuable addition to the libraries.

In the preface we are quite adequately informed of the problems in Bermuda today. The continual sacrifice and degradation of early traditions to commercialism occurs there as well as in the United States. Nevertheless, we are led to believe by the next and accompanying photographs that there are still many beautiful examples undefiled.

The historical note gives a brief résumé of the early life on the island. It was known as early as 1511, when it was visited by Juan de Bermudez. In 1609 a party of adventurers from England ran ashore there. The glowing reports of this new land given upon their return to England caused the Virginia Company to enlarge its charter to include Bermuda. In 1616 Daniel Tucker became the first governor. He surveyed the land and divided it into eight tribes. The present day parishes are founded upon these divisions. From then on the history is traced through the rise and fall of the fortunes of this romantic island. At the present time the tourist brings it prosperity. We may hope that this will not contribute too greatly to the destruction of the native traditions.

The average architect is so confronted by problems of planning, architectural style and complications of the 20th century that the straightforward solution of his problem is often lost. The author states that the original buildings of early Bermuda fit well into the landscape, that in no case are they self-conscious. That fact alone makes them worthy of careful study. If we would always try this test on our own problems many mistakes would be avoided.

Bermuda is an island of volcanic rock, too soft for carving but in adequate quantities for all buildings, covered with a thin layer of soil sufficient for luxuriant vegetation. Taking water supply from underground there is unknown. Water for all purposes comes from the abundant rainfall caught from the roofs of the houses. This accounts for the steep roofs and small projections of cornices, and makes it necessary that their roofs be always kept clean. They are built of thin slabs of stone and often whitewashed. Our eyes, accustomed to heavy or solid color crowning our façades, might make these cottages seem slightly anæmic at first glance. On further investigation it is obvious that this is one more of the characteristics which give these Bermuda houses charm. Stone carving is seldom seen, as skilled workmen have never been available.

In floor planning we see another individual character-

[1] *Bermuda Houses.* By John S. Humphreys. Marshall-Jones Co. 1924.

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istic. One room opens into another as convenience requires. It is refreshing to see a simple plan with the complications of the modern house eliminated. Often it is noticeable that they ramble, at the same time retaining a balance.

Thus nature has combined with historical development to produce a unique architectural style in Bermuda. It is direct, sincere and free from affectation. The collection of photographs duly informs us of its beauty. It is easy to see how the author has been impressed, and his enthusiasm has in turn filled us with keen appreciation for this work. From his descriptions and illustrations we can easily build a picture of these houses of mellow stone, surrounded by semi-tropical verdure, the blue of sky and the brilliance of gardens. In fact, the picture is quite complete. For this alone each member of the profession should feel indebted to the author for his contribution.

SUMNER MAURICE SPAULDING.

Byways in Spain

Our picturesque Mr. Cram, in an introduction to Winsor Soule's "Spanish Farm Houses and Minor Public Buildings,"[2] has woven a myth and has cast over the whole a charm quite enthralling to the "un-circular-triperized"—to use his own coinage. Even the dutiful and dry tripper might well regret his conventional ignorance of the technique of travel after inhaling the atmosphere of simple grandeur brought back and given to us by Mr. Soule in this publication.

Mr. Cram states that the composition of these small buildings is so good it could not be premeditated. This fertile suggestion gives at once a wonderful opportunity for an argument. It is a possible subject for volumes of interesting discussion—more of which among architects would add flavor to a life which is too often nowadays—well, we all know what!

We should, theoretically, all take trips to Spain and write subtle introductions to each other's books—and we would, were we all Crams or Soules.

But just to start the argument let us say that we do not agree with Mr. Cram's inferences; that we are fully convinced, Mr. Cram notwithstanding, that the psychology of form and color and the intelligent use of this psychology by architects would *not* lend itself to dryness.

Let us argue that the intelligent study of the requirements for the best development of roses does not lead to the wrong planting and care of them—or to the production of a less lovely fragrance—even though a non-scientific rose culture may, by chance, have produced some excellent results in centuries gone by.

Let us affirm—and, growing warm to the argument, pound the old draughting board—and again insist that the unconscious inherited attributes of the mind, after all, largely render the ultimate judgment on form and color; that these mind-attributes in any two individuals of the race are, fundamentally, as like as the love of any two roses for the sun and air; and that the more thoroughly we know the history and mechanics of these mental attributes—these unconscious mental needs—the more easily and gracefully we may accomplish their satisfaction.

We will then declaim, taking an attitude of defense, that the danger in the path of the unintelligent architect lies in his endeavoring to satisfy the taste which the public thinks it *ought* to have; whereas, having grasped the psychology of form and color, he should appeal first to the basic tastes bred into the individual by the whole of race experience—unconscious tastes, which the individual no more controls than he controls his desire for food.

After enjoying the natural dignity found in the pictures which Mr. Soule spreads before us, one is not yet convinced with Mr. Cram that they are more perfect because less premeditated. Nevertheless their freshness forces the conclusion that only as the architect assimilates the basic principles and makes them a part of his very self—only as he is able to submerge them; only as he is able to produce the natural simple solutions of the problems of this day and this civilization, can he be said to be adding to the progress of the world.

All architects, of whatsoever clime or training, will be inspired by Mr. Soule's book of rural Spain.

STANWOOD STERRITT.

A Handbook for Students

The book[3] gives information and advice which is useful both to the student and to his parents. The prevalent public ignorance of the guiding principles of an architect's career amply justifies the writing of such a book, even though the education of the public is only incidental to its main purpose. Unquestionably there is much sound advice which is applicable to students in both countries, but its direct appeal is to the prospective English architect. For us in America, therefore, its interest lies in the indication of the differences in educational methods which prevail on the two sides of the Atlantic.

In this connection it is of interest to note that the standard architectural course in England is for five years, a characteristic which has been strongly urged as a necessary improvement in our schools here, although it is difficult to determine whether the entrance requirements for such a course are on an equality with our own.

It is also noteworthy that no special reference is made as to the value of a college course in preparation for the highly specialized year of professional study, even though there is ample recognition of the need for the greatest possible breadth in the students' general background.

One of the most useful features of the book is an excellent outline for an architectural library. The list is prepared with judgment and discrimination, and should prove useful to all students. On the other hand the examples of architectural draughtsmanship which are shown are of very unequal quality, and overemphasize the use of pen and ink with its relative lack of true values. An excellent index adds much to the general availability of the volume. WILLIAM EMERSON.

[2] Architectural Book Publishing Co., 1923.

[3] *Architectural Students' Handbook.* By F. R. Yerbury, Technical Journals, Ltd.

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FROM OUR BOOK SHELF

Some Old Connecticut Houses

This is a folio[4] of twenty-five plates, consisting of measured drawings with full-size details of moulded sections, supplemented by photographs. All the examples in this collection are interesting as a revelation of the carpenter's "interpretation" of the eighteenth century handbook: some of them, like the front entrance to the Ives House, in Cheshire, Conn., are ingenious departures from conventional practice, whilst others, like the door in the house at Guilford, are simply honest vernacular design, without a trace of Palladio. While the freedom and spontaneity which these houses exhibit are delightful, one wonders how much of the spirit can be rendered by a draughtsman in search of details. In so far as Colonial architecture can be reproduced by this method, however, Mr. Kelly's plates will be a valuable guide; and their format should make them particularly serviceable in the draughting room. Although the date of these houses is not given, they precede in taste, if not in time, the rigorous Early Republican Mode: they belong more to the farmer than to the merchant, and more to the country than to the town.

LEWIS MUMFORD.

Some Colonial Interiors

The author has "endeavored to make this book[5] primarily a pictorial summary rather than a documentary one." We take this to be the author's somewhat euphemistic way of explaining that he is attempting to add to the vocabulary of Colonial work rather than to make any logical or fundamental presentation of the material which he has collected. It is only fair to judge his book in the light of his purpose. The question which we ask about it then is—how much new material has he presented, how much of this material is distinguished, and how usable is the form in which it is offered?

In one sense little new material is offered to the architect already familiar with existing records of Colonial work. The book is made up entirely of Interiors. The author's method has been to collect photographs already taken of work already known rather than to hunt out and photograph unknown examples. He has divided these into groups by subject—general interiors, fireplaces, staircases, doors and windows—and, generally speaking, arranged the material of each group in chronological order. Maryland and Virginia are represented, Pennsylvania and Delaware, the District of Columbia and the New England states, except Vermont. Massachusetts, with its hundred plates, predominates; the book contains as many from this state as from all the other states combined. Examples from Pennsylvania and Connecticut bulk largest after those from Massachusetts. Other states are represented by from two to ten plates each.

The group of General Interiors give a well-proportioned arrangement of late 17th, early, middle and late 18th century work. Early fireplaces are shown only as an element of these General Interiors. Fireplaces as a separate group are chiefly confined to mantels and details of mantels, and so are late in period. Of a late period also, generally speaking, are the groups of staircases, doors and windows, the window group being the weakest of the collection.

Of the distinguished work shown there are the Capen, Royall and Jeremiah Lee houses from Massachusetts; a staircase from the Rochambeau-Vernen house, Rhode Island; Sewall house, Maryland; Webb house, Connecticut; Shirley, Branden, Westover from Virginia; Wentworth house, New Hampshire. Of this the Sewell and Webb houses are quite new material. In general the Connecticut work is the chief contribution.

Distinguished also, at any rate for helpfulness, are the score or so of scale drawings reproduced in the back of the book. These with the Connecticut work and occasional isolated examples from other states are the sources of interest to the architect. The touching up due to unevenness in quality of the photographs is to be regretted, as is also the frequent padding and the too numerous errors of caption.

There is room for a book on Colonial interiors which shall be arranged to a logical or structural idea. Vocabulary is desirable and necessary, but something more is needed in the use of the Colonial style, and this something could be indicated by a book on interiors compiled under the guidance of a logical idea. THOMAS P. ROBINSON.

Gardens

Garden Colour[6] has little of practical value in it for either the architect or landscape architect. It is written largely as a reference book for English amateur gardeners, and while any book on English architecture is likely to be worth reading by an American architect, there is a difference when it comes to English gardening—a difference of climate! Many of the plants mentioned as available for naturalizing, such as cyclamen, are only grown in hothouses here. In California and the South it is possible that most of them will thrive.

The book has a degree of inspirational worth: the emphasis on simple grouping of large masses of flowers; the plea for the use of shrubs with colored twigs and attractive berries for winter effects, and the massing of these shrubs; the insistence on the beauty of much native material; all things that can bear emphasis no matter how well we realize them.

There are specific examples of planting, too, that have interest, such as the use of *Forsythia Suspensa* for training against houses, for the various purposes to which climbing and trailing roses may be put, and for combinations of flowers for special and definite effects.

All this and more is here. There are many illustrations—reproductions of rather wishy-washy but suggestive water colors. The book's greatest fault is that to reach the valuable material in the text one must wade through pages of flamboyant phrasing. Why will writers, and especially women writers, give vent to maudlin sentimentality when discussing gardens? D. K.

[4] *Early Connecticut Architecture*, by J. Frederick Kelly, A.I.A. William Helburn, Inc.

[5] *Colonial Interiors*. By Leigh French. William Helburn, Inc. 1923.

[6] *Garden Colour*, edited and illustrated by Margaret Waterfield, with articles by Mrs. C. W. Earle, E.V.B.; Rose Kingsley, Hon. Vicary Gibbs and others. E. P. Dutton & Co., New York. 1922.

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Marginalia Architectura

THERE seems to be dawning at the present time a certain toleration among the cognoscenti and literati for what might be termed the calisthenics of architecture. The public regards the practice of the profession as a healthy and beneficent exercise on the part of its devotees, and views with complacence their varied convolutions and anfractuosities. Magazine writers and paragraphers of the daily press frequently devote a few lines to some architectural topic that betokens an awakening interest in the noblest of the arts. Such English writers as Arnold Bennett, Leonard Merrick, and Aldous Huxley have introduced minor characters who speak quite frankly about architects and their ways. In *The Old Adam* there is an architect, a rather pathetic figure, skilfully drawn, who appears from time to time and lends interest to the picture. In several of Mr. Merrick's books, notably *A Chair on the Boulevard* and *While Paris Laughed* (books which should be in every architect's library, so overflowing are they with the joyousness and pranks of youth), there is a rejuvenescence of the spirit of Cellini, Cervantes, and Casanova. Aldous Huxley in *Antic Hay* has drawn a wonderful picture in old Gumbril of an architect gone to seed, but still vibrant with the divine fire. Here is what he says about the modern indifference to the Aganippides, immortal daughters of Zeus and Mnemosyne:

"It has always struck me as very curious that people are so little affected by the vile and discordant architecture around them. Suppose now that all these brass bands of unemployed ex-soldiers that blow so mournfully at all the street corners were suddenly to play nothing but a series of senseless and divided discords—why, the first policeman would move them on and the second would put them under arrest, and the passersby would try to lynch them on their way to the police station. There would be a real spontaneous outcry of indignation. But when at these same street corners the contractors run up enormous palaces of steel and stone that are every bit as stupid and ignoble and inharmonious as ten brass bandsmen, each playing a different tune in a different key, there is no outcry. The police don't arrest the architect; the passing pedestrians don't throw stones at the workmen. They don't notice that anything's wrong. It's odd, it's very odd.

"The fact is that Architecture is a more difficult and intellectual art than music. Music—that is just a faculty you're born with, as you might be born with a snub nose. But the sense of plastic beauty—though that is, of course, an inborn faculty—is something that has to be developed and intellectually ripened. It's an affair of the mind; experience and thought have to draw it out. There are infant prodigies in music; but there are no infant prodigies in Architecture. . . . A man can be an excellent musician and a perfect imbecile. But a good architect must also be a man of sense, a man who knows how to think and profit by experience. Now, as almost none of the people who pass along the streets of London, or any other city of the world, do know how to think or profit by experience, it follows that they cannot appreciate Architecture. The innate faculty is strong enough in them to make them dislike discord in music; but they haven't the wits to develop that other innate faculty—the sense of plastic beauty—which would enable them to see and disapprove of the same barbarism in architecture."

* * *

Painters with imagination are finding architectural subjects worthy of careful analysis, and we may hope again to see such great canvases as those of Fragonard. Hubert Robert and Canaletto. French and Italian writers have always been very frank in mentioning architects where the occasion seemed to warrant. The "Divine" Aretino's letters to Titian, Sansovino, and Michelangelo show forth his best qualities, his worship of art, and his admiration and affection for artists. This most baffling and abnormal character, whose influence during his lifetime was prodigious, whose insolence and debauchery were without parellel, in an age in which moral standards were complex and inscrutable, displayed his truest and sincerest instincts in his love of art.

* * *

Really interesting treatises on architecture are rare, and when one is found laden with the scent of asphodels, perfumed with the honey of Hymettus, so to speak, let note be made.

Blondel's *Cours d'Architecture,* published in 1771, contains his lectures given in 1750 and the years following in his School of Arts. He treats in his Introduction of the utility of architecture and of the means of acquiring the talents necessary to an architect. After giving an abridged history of architecture, the origin of the arts of gardening, sculpture, and painting, three chapters are devoted to the sources of art, the precepts of art, and the reasoning of art. There are a number of plates to illustrate the various details, proportions, accessories, and so on; the material and visible expressions, the *membra disiecta,* as it were, of the inner and spiritual arcana of the Castalian font.

Chapter Four: (Analysis of Art, or the Means of Knowing how to Distinguish Good from Mediocre Architecture)—apparently there was no bad architecture in those days—and Chapter Five (concerning Taste in Art, or the Manner of Avoiding all that which is Contrary to It) contain in about one hundred pages some of the best writing on architecture ever offered to a callous world. There are little monographs on the *Sublimity of Architecture, The Admiration that Architecture May Cause, On True Style in Architecture, What is Understood by Beautiful Architecture, On the Nobility of the Forms in Architecture, On the Difference Between a Male, Firm, or Virile Character in Architecture, What is Understood by a Mysterious Architecture, What is Frivolous Architecture,* and other topics that represent a liberal education to any who may read them.

Here is a little extract to whet the appetite, a spiritual aid for intellectual digestion:

"To define the sublime of which we are speaking, one must himself be sublime, and we are far removed from that perfection. Moreover, we agree that there are limits which must absolutely never be exceeded, if one

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does not wish to fall into the gigantic, which only impresses the vulgar. A colossus without proportions, and composed, so to speak, of pieces brought together, cannot obtain the suffrages of men of taste, nor of reasonable men, no matter how grand may be the idea. To reach to the Sublimity of Art, one must reunite in his productions knowledge, genius, beauty, regularity, convenience, solidity, and usefulness; but, however, it must be understood that the methodical mind, meditation, austerity can produce a good architect, and that genius, soul, enthusiasm alone can raise the artist to the Sublime; that the mind defines, that sentiment paints, and that is what gives life to all productions."

* * *

To advert to a modern example that is pertinent as exemplifying a fine appreciation for what is best in architectural expression, the following was clipped recently from the New York *Evening Post;* it should cause the bosom of the architect of the building under discussion to become "perfumed with pride."

"We have discovered a Bank in which poets ought to keep their accounts. It is so unquestionably the most beautiful thing of its kind we have ever seen that it deserves a paragraph of its own. It is the new building of the Equitable Trust Company in Atlantic City: a sober, secure, dignified little edifice when first seen from the outside; then, as you study it, unobtrusive charms begin to be apparent. The cunningly rounded window-corners, the marble strips inside the window-frames, the tall columns of contrasting marble at the front door, leading up to a porch ceiling of iridescent tiles which, when lit at night, glitter like peacock feathers—all this is handsomely symbolic of the spirit of a city whose prosperity is based upon gayety—whose livelihood is liveliness. And inside, if you are a lover of such matters, Mr. Kelly, the delighted cashier, will show you how different the building is from the dull heaviness or the equally dull magnificence of most successful banks. First, while the building had seemed not large, you will be amazed at the space and height: at the soft shining of the birch-bark colored walls, the iron grill-work suggestive of old Spanish treasure-chests, the touches of color and harmony everywhere. Behind the iron railing the open circular door of the vault, in a great ring of glimmering steel, shines like an immense jewel set in dull silver. This door, as lovely and intricate as the works of a watch, is lit up at night by reflected lighting, and people halt on the pavement to peer in and wonder where that lunar-like illumination comes from. A rumor even went about that the door was made of solid silver. All this sort of thing, need we add, is Good Business. Get people wondering, and they'll talk; and talk is the material of prosperity, humanity being what it is.

"The people who work in the Equitable Trust Company of Atlantic City, when they moved into their new building last summer, suddenly found themselves, unexpectedly, amazingly, and by the genius of the architect who had planned and executed their new quarters, living daily among surroundings of beauty. And lo, how they responded, as people almost always will. Their own pride was involved. We asked one of the janitors what he thought about the building. 'I'd like to see anyone scratch it!' he replied, almost fiercely.

"There isn't a thing in the whole building, from lighting fixtures to radiator screens, from window curtains to the racks for deposit slips, that isn't a perfectly planned integral in a harmonious whole, as prettily thought out as a boudoir of Old France. The place is bright and strong and charming as a jewel casket. That is what one means by the spirit of Art. It is a sense of pride in the thing itself, over and above its mere utility."

* * *

Unfortunately the change of ownership in the *Evening Post,* which went into effect January first, has deprived us of Dr. Morley's stimulating column. Satisfied nullity and banal solemnity have replaced with sententious prudhommeries the poetic inflatus that formerly graced its pages. Herodotus tells us how the cohorts of Cyrus destroyed the Ionic Order in Asia Minor and captured the cities of Phocæa, Teos, Miletus, and the other Greek colonies by means of mounds; forcing the inhabitants to shut themselves up within the walls, he heaped piles of earth against them, and thus carried their towns. The Ionic Order still flourishes, for its spirit is immortal, and the fount of the Hypocrene, *quand meme,* flows in the sacred groves of Mount Helicon. H. G. R.

Current Activities

Scientific Research Department
Producers' Research Council
Structural Research Committee

Revision of Code of Lighting of School Buildings. (Under American Engineering Standards Committee procedure.) A meeting of the Executive Committee of the Sectional Committee was held in New York on 26 February. The Institute, joint sponsor for this code with the American Society of Illuminating Engineers, was represented by Mr. E. C. Dobbin.

The revised draft, dated 23 January, was submitted for final review and with a few changes was regarded as ready for submission for adoption. The discussion centered largely around a diagram of a class room, two members holding the diagram should indicate the ideal location of the windows (on left side and off center to rear of classroom) and one of the two that this ideal could be realized in general practice. The architects pointed out the impracticability of consistently carrying out this ideal under the varying conditions of practice. They held that practical conditions could be met by a window arrangement very nearly approximating the ideal (on left side in center of wall). The Committee felt the diagram should indicate what was recognized as a good and practical window arrangement and a footnote was inserted recommending the ideal arrangement wherever conditions would permit.

Standard Specifications for Terra Cotta. (Under American Engineering Standards Committee procedure.) A meeting of the sectional committee was held 1 February, Washington, D. C. The Institute was represented by Mr. L. E. Kern. The Standard Specifications as prepared by the National Terra Cotta Society were submitted for discussion. Mr. Kern called attention to the possibility of the A.E.S.C. not accepting the specification in the form presented, as it includes certain items, such as

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delivery of materials, not usually contained. The opinion was, however, that the specification should be presented to the A.E.S.C. in the general form, and if the items referred to were not approved, they could be modified.

Mr. J. W. Ginder, of the office of the Supervising Architect, questioned whether the clauses on quality of material would insure the receiving of Terra Cotta of the finish desired or of Terra Cotta able to perform its proper "functions." The other members called attention to the fact that the particular paragraphs referred to were those which possibly had received more discussion and more revision in the preliminary drafts than any others, and that while they might not be as desirable as it is ultimately hoped they can be made, yet in the present development of the art and industry they are an improvement over anything previously available. Furthermore, the manufacturer at the present time is giving particular study to these items and in view of the closer contact now maintained between the architect and the manufacturer it was believed that the points were as well covered as is possible at present. Mr. Ginder's motion that the Bureau of Standards as sponsor for the Standard Specification for the Manufacture, Furnishing and Setting of Terra Cotta, as adopted by the National Terra Cotta Society, recommend to the A.E.S.C. its adoption of these specifications, with the sole amendment that "Suggestions for" from the heading "Suggestions for Corollary Clauses" be removed, was unanimously adopted.

American Engineering Standards Committee. A meeting of the Executive Committee was held in New York on 14 Feb. Mr. S. W. Jones represented the Institute. Dr. A. S. McAllister, chairman of the Department of Commerce Committee on a Pan-American Conference, gave a résumé of his Committee's preliminary report to Mr. Hoover. The consensus of opinion seemed to be that there was a need for a Pan-American Conference to promote uniformity of standards. It was resolved that the chairman offer to the Government the offices of the A.E.S.C. in furthering development of an engineering glossary for Pan-American use and that the A.E.S.C. express its interest to the Government in the proposed Pan-American Conference on standardization and offer to aid in making it a success in any specified way.

The report of the special committee to consider Standard Symbols for Wiring Plans for the Electrical Equipment of Buildings was recommended for adoption. It was voted that the question of approval of these symbols as tentative American Standards be put to letter ballot with recommendations for favorable action.

A meeting of the Producers' Research Council was held on 11 April at the Old Colony Club, New York City. Mr. O. C. Harn, chairman, reported that the Advisory Committee had been appointed and had held several meetings, but none with the Institute as yet. He advised against hasty movements, saying that the Council wished members with ideals comparable to those of the Institute. Mr. Lyman Clark, General Electric Co., stated that he felt certain that the Chicago manufacturers would join the Council when a constitution has been adopted. The Chicago meeting, to which he referred, was attended by about 18 interested producers. It was stated that the work of the Council was to change the attitude of manufacturer and architect so that better contact, as through salesmen, would follow as a matter of course. In this connection Mr. Laurence, National Terra Cotta Society, suggested that salesmen and sales managers meet two or three times a year to be addressed by a leading architect on the subject of the architects' point of view.

Mr. Harn remarked that members of the Council have the privilege of meeting members of the Institute and the privilege of the floor, at the annual Conventions.

A letter from Mr. Ben J. Lubschez, Director, Scientific Research Department, was read into the minutes. Some portions of it are deemed worthy of quotation, because of the point of view expressed:

"Architects are at a great disadvantage when they do not understand properly the production of the materials they use constantly, and most of them do not. That producers do not understand architects is evident from a great deal of trade literature distributed by the producers and also from the character of the products themselves. There is undoubtedly room for a getting together of both for the good of both. I feel that the Institute has already done a great deal for the building industry principally through its JOURNAL and its Structural Service Committee. You are familiar, of course, with the standardization of size of trade literature and advertising since the beginning of the JOURNAL'S campaign for informative rather than merely laudatory advertising, yet just the other day I spent nearly an hour reading praise of a staple product, with the virtues of which I was entirely familiar, in my quest for the stock sizes of this product, for which information I finally had to call the manufacturer on the telephone.

"Hardly a day passes but I receive two or three pieces of mail addressed to the 'specification writer.' Three-quarters of the things the specification writer specifies are determined in character and quality by his chief, the architect and designer.

"In practice the only feasible method of contact, it seems to me, would be between an organization of broad-minded and representative producers and the Institute with its 3,000 members and many committees, through some permanent contact organization under the leadership of one who had a keen knowledge of both parties, and could command the respect of both. Whether such an individual can be found is hard to say. It must also be remembered that although I believe the Institute and its members and committees are ready to go the limit in altruistic co-operation for the good of the whole building industry, the organization required to maintain the multi-point contact between architects and producers will require a considerable budget towards which the Institute is unable to contribute any great part. The way was opened for any extent of contact and co-operation the producers may want when The Scientific Research Department was formed by the Institute . . . and the affiliated Producers' Research Council was organized."

The election of officers will take place at the annual meeting this month.

Protection of Records.—A meeting of the Committee on Protection of Records of the National Fire Protection Association was held in New York City, March 5. Reports of the various sub-committees were read and discussed and with a few suggested changes were recommended for adoption. The complete report will be available for distribution in the near future.

Simplified Recommendations for Paint.—The recommendation of the Paint and Varnish Conference held at the Department of Commerce on April 25, 1923, failed of acceptance by 80 per cent of the industry, the principal objections being from producing group of members.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

A Study of Hollow and Solid Gypsum Tile (10a3) (*Technical News Bulletin Number* 83. *Bureau of Standards.*) In view of the great number of gypsum tile, both hollow and solid, used in present day construction, for non-bearing interior partitions and as protection for columns, elevator shafts, etc., against fire, a study of the characteristics of this material has been made by the Bureau of Standards. The work completed covers the determination of the physical and chemical properties of all sizes of the tile. Measurements have also been made of the movements in a gypsum tile partition over a period of six months.

The results of both phases of the investigation are to be published in the Proceedings of the American Society for Testing Materials.

U. S. Government Specification for Water-Resisting Red Enamel (25b23) (*Federal Specifications Board Standard Specification No.* 66. *Circular of the Bureau of Standards, No.* 146. *Size* 7" x 10." *Pages* 6.)

General.—The material desired under this specification is an extremely durable, highest quality red enamel, suitable primarily for outside use. It should be made by grinding pure high color strength toluidine red toner (metanitro-paratoluidine-azo-betanaphthol), free from any base or substratum, with the very best water-resisting long oil spar varnish. The color and hiding power when specified shall be equal to those of a sample mutually agreed upon by buyer and seller. It must meet the following requirements:

Weight per Gallon.—Not less than 7½ pounds.

Pigment.—Not less than 6 per cent by weight; pigment to be composed entirely of pure high color strength toludine red toner, free from any other organic coloring matter, base, or substratum.

Coarse Particles and "Skins" (total residue retained on No. 325 sieve), not more than 0.5 per cent.

Non-volatile Matter.—Not less than 60 per cent by weight.

Set to Touch.—In not more than 18 hours.

Dry Hard and Tough.—In not more than 48 hours.

Working Properties.—Enamel must have good brushing, flowing, covering, and leveling properties and must not cake in the container.

Water Resistance.—Dried film must withstand cold water for 18 hours and boiling water for 15 minutes without whitening, dulling, or change in color.

Toughness.—Enamel must pass a 50 per cent Kauri reduction test at 24° C. (75° F.)

NOTE.—This specification also includes sampling, laboratory examination, and basis of purchase.

Compressive Strength of Sand-lime Brick Walls (3f3) (*Technical News Bulletin No.* 83. *Bureau of Standards*). Ten sand-lime brick walls and 12 wallettes were tested in the 10,000,000 lb. vertical machine during the month. Half of these were built with cement-lime mortar and half with lime mortar. The tests showed the former to be more than twice as strong and roughly about ten times as stiff as those built with lime mortar. The latter walls, however, showed a compressive strength of about 300 lbs. per sq. in., which means that under its own weight such a wall would have to be 350 feet high before it would crush at the bottom.

Judging from the opinions of various engineers and others who have witnessed these tests the results, covering as they do unusually large wall specimens, will furnish very valuable data for use in future construction.

Revised Symbols for Wiring Plans

On the following page are given the American Standard Symbols for Wiring Plans as adopted and recommended for the electrical equipment of buildings by the American Engineering Standards Committee. These Symbols supercede those adopted by the National Electrical Contractors' Association and the American Institute of Architects.

The following synopsis of the report of the A.E.S.C. Sub-Committee will indicate the thought and study which has been given to this work and the number of interests consulted.

The Sectional Committee on Standard Symbols comprised the following 17 organizations: American Institute of Architects; American Institute of Electrical Engineers; American Electrical Railway Assn.; American Railway Assn. (Eng. Div.); American Telephone & Telegraph Co.; Association Manufacturing Electrical Supplies; Bureau of Standards; Bureau of Engineering, U. S. Navy; Bureau of Yards & Docks, U. S. N.; Electric Power Club; Kaiser, Muller & Davies; National Association Electrical Contractors and Dealers; National Electric Light Assn.; National Fire Protection Assn.; Society Naval Architects and Marine Engineers; Supervising Architect, U. S. Treasury; U. S. Army.

Sponsors: American Institute of Architects, American Institute of Electrical Engineers, National Association of Electrical Contractors and Dealers.

Since this was considered too large a Committee to function efficiently it was decided to place the preliminary work in the hands of a Sub-Committee consisting of the following six members: American Institute of Architects; American Institute of Electrical Engineers; National Association of Electrical Contractors and Dealers; Bureau of Engineering, U. S. Navy; War Department (Construction Service Q. M. Corps); U. S. Bureau of Standards.

This Sub-Committee charted all of the available data and copies of the Chart were forwarded to all members of the Committee for their consideration. Approximately 3,000 Symbols of various types were submitted to the Committee, of which approximately 35 per cent were found adaptable for building purposes, 45 per cent for ships, and 20 per cent of no value.

Considerable data was also received showing suggested types of Symbols for illuminating fixtures but at the time this Committee was organized it was agreed that proposed Symbols should not embrace parts attached to the outlets except such as are a part of the permanent installation.

In arriving on the types of Symbols, due consideration was given to the Symbols most widely used at the present time and also to the general appearance of the Symbol and the simplicity in applying same to the wiring plans.

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Standard Symbols for Wiring Plans

As recommended and adopted by The American Institute of Architects, the Association of Electragists, International, and the American Institute of Electrical Engineers, and approved by the American Engineering Standards Committee on 6 March, 1924

- Ceiling Outlet
- Ceiling Outlet (Gas and Electric)
- Ceiling Lamp Receptacle — Specification to Describe Type Such as Key, Keyless or Pull Chain
- Ceiling Outlet for Extensions
- Ceiling Fan Outlet
- P.S Pull Switch
- D Drop Cord
- Wall Bracket
- Wall Bracket (Gas and Electric)
- E Wall Outlet for Extensions
- Wall Fan Outlet
- R Wall Lamp Receptacle — Specification to Describe Type Such as Key, Keyless or Pull Chain
- Single Convenience Outlet
- $_2$ Double Convenience Outlet
- J Junction Box
- Special Purpose Outlet — Lighting, Heating and Power as Described in Specification
- Special Purpose Outlet — Lighting, Heating and Power as Described in Specification
- Special Purpose Outlet — Lighting, Heating and Power as Described in Specification
- Exit Light
- Floor Outlet
- F Floor Elbow
- Floor Tee
- S^1 Local Switch—Single Pole
- S^2 Local Switch—Double Pole
- S^3 Local Switch—3 Way
- S^4 Local Switch—4 Way
- S^D Automatic Door Switch
- S^K Key Push Button Switch
- S^E Electrolier Switch
- S^P Push Button Switch and Pilot
- S^R Remote Control Push Button Switch
- T.S. Tank Switch
- Motor
- M.C. Motor Controller
- Lighting Panel
- Power Panel
- Heating Panel
- Pull Box
- Cable Supporting Box
- Meter
- Transformer
- Branch Circuit, Run Concealed Under Floor Above
- Branch Circuit, Run Exposed
- Branch Circuit, Run Concealed Under Floor

- H This Character Marked on Tap Circuits Indicates 2 Number 14 Conductors in ½" Conduit
- H H This Character Marked on Tap Circuits Indicates 3 Number 14 Conductors in ½" Conduit
- H H H This Character Marked on Tap Circuits Indicates 4 Number 14 Conductors in ¾" Conduit Unless Marked ½"
- H H H This Character Marked on Tap Circuits Indicates 5 Number 14 Conductors in ¾" Conduit
- H H H H This Character Marked on Tap Circuits Indicates 6 Number 14 Conductors in 1" Conduit Unless Marked ¾"
- H H H H This Character Marked on Tap Circuits Indicates 7 Number 14 Conductors in 1" Conduit
- H H H H H This Character Marked on Tap Circuits Indicates 8 Number 14 Conductors in 1" Conduit

NOTE—If larger conductors than number 14 are used, use the same symbols and mark the conductor and conduit size on the run.

- Feeder Run Concealed Under Floor Above
- Feeder Run Exposed
- Feeder Run Concealed Under Floor
- Pole Line
- Push Button
- Buzzer
- Bell
- Annunciator
- Interior Telephone
- Public Telephone
- Clock (Secondary)
- Clock (Master)
- Time Stamp
- Electric Door Opener
- F Local Fire Alarm Gong
- Z City Fire Alarm Station
- F Local Fire Alarm Station
- F Fire Alarm Central Station
- Speaking Tube
- N Nurse's Signal Plug
- M Maid's Plug
- Horn Outlet
- District Messenger Call
- W Watchman Station
- W Watchman Central Station Detector
- P B X Public Telephone—P B X Switchboard
- IX Interconnection Telephone Central Switchboard
- Interconnection Cabinet
- Telephone Cabinet
- Telegraph Cabinet
- Special Outlet for Signal System — As Described in Specification
- Battery
- Signal Wires in Conduit — Concealed Under Floor
- Signal Wires in Conduit — Concealed Under Floor Above

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Plagiarism as a Fine Art

WHEN the President of the Institute asked me to organize and conduct a session of the Convention this year, he gave me a free hand in the choice of topic and of the men to treat it. It appeared pretty obvious that the subject worthy of devoting a whole session to must be one of real and deep significance to the profession and be in the public interest as well. And it seems to me that nothing to do with architecture is of such vital consequence just now, in these days of readjustment to the conditions of a world awry, as to direct the thought of the whole profession, those now practicing and those who will take our places, toward the future of American design. If art be, as I believe it to be, the expression of the civilization that gives it birth, the inexorable recorder of the taste, culture, and intellectual and spiritual level of that civilization, then we architects have a grave responsibility toward contemporary society that its taste and ideals may be worthily expressed and recorded for posterity. Shall the record be an inspiration or a warning?

It was clear to me also that I must choose my coadjutors from the profession itself, since only designers may discuss design with that degree of insight we may not expect to find in even the most enlightened and intelligent layman. And in surveying the available field I have chosen men who not only represent differing schools of thought and disparate training, but who are eminently qualified by all their talents to make valuable and constructive contributions to the subject. They need no introduction to you. They are William A. Boring, Ralph Adams Cram, William L. Steele, and Walter R. B. Willcox. Professor Boring will, I hope, not object to be called an Authoritarian, Cram, I trust, will not flinch from the designation Mediævalist or even Gothicist, Steele is of that school of which Louis Sullivan is another notable exemplar, Willcox may be called a progressive eclectic. I shall have something to say also but just where to place myself I know not—the Classicists I understand won't have me, and the Gothicists repudiate me, which permits me to roam at large in that delicious and irresponsible freedom known only to the excommunicated. Geography, which is to say environment, has a lot to do with moulding a man's ways and habit of thought and I took that into consideration also in framing the list from which the ultimate choice was made: Cram from Boston, Boring trained in New York and Paris, Steele in Illinois, Willcox in Boston and Philadelphia and the far North West, myself chiefly in New York.

As the chairman of this session I have seized the opportunity to have the first word—and perhaps the last as well.

The most difficult part of the task was to find a name for the subject to be discussed. I knew perfectly well what it is, but what to call it on the program! Something urbane, something non-explosive, something safe—but not so safe as to make the delegates decide to go somewhere else this afternoon. Various titles suggested themselves—The Use and Abuse of Precedent—The Architect and his Use of Precedent—Adaptation or Creation—Collation or Design—all these and others came to mind. At last Mr. Kemper suggested the official title—What is Precedent doing to American Architecture? But I will not conceal from you my own preference, which is —PLAGIARISM AS A FINE ART.

For, ladies and gentlemen, we architects in America have raised plagiarism from the low estate in which it languishes in the other arts and professions to the rank of an art in itself and one highly esteemed. We applaud its successful practice by each other, we educate our public to applaud it, and our public responds with enthusiasm and rewards us by bestowing further opportunities for its exercise. Before you damn me quite for such a statement and bristle at it as a base betrayal of a guild secret, let us consider together and see whether I am far wrong.

In literature, the undergraduate who borrows the thoughts and phrases of any other man, living or dead, is plucked if he is found out; in our schools of architecture the unfledged plagiarist gets a medal—the fact that he is unfledged has nothing to do with his not being plucked. The mature writer, novelist, poet, dramatist, who appropriates the intellectual capital of any other author, living or dead, is universally condemned and the offence is rare.

In music, that subtle and elusive art in which it would seem almost impossible not to repeat harmonies heard perhaps years before, the composer scrupulously avoids the faintest far-off echo of the strains in which other musicians have sung out their souls; and should he perchance fail to do so by never so faint a recall, the critics

[1] This and the four succeeding papers were read by the authors at the Annual Convention held in Washington, 21-23 May, 1924.

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and amateurs of music instantly pronounce his work reminiscent and the value of his composition is nullified at once; thus, in music the mere reminiscence of another's work is banned.

Pass the sculptors of the world in review and ask ourselves if they, in all the vast company of works they have wrought in the long history of their art, have not sedulously avoided the repetition of pose or gesture or character that has been used before. And what should be the fate of the sculptor who adapts another man's work, living or dead, to his own uses and calls it his own?

What of the painter? Is he content to repeat the concepts, the tones, the handling of light or of pigment of dead or living men? Is not his life devoted to the search for a meaning, a coloration, a technique, a point of view, that shall be his very own? The merest novice instinctively recoils from such heady flattery as the implication that he draws just like Michael Angelo; he wants to draw as well as Angelo but he wants to draw like himself, not another, however exalted.

It is their glory and their pride to be themselves, to be individual, these fellow artists of ours. In short, in the arts of Literature, Music, Painting, and Sculpture, plagiarism is not—well, shall we say, not admired? And the plagiarist, with us so envied, so emulated, and so rewarded, with them weeps and gnashes the despairing tooth in outer darkness.

Let us ponder these things well and then let us look ourselves square in the eye, perhaps in the sacred privacy of the bathroom mirror, and ask ourselves whether we architects are plagiarists or not, and if we are, Why? And if we think not, then let us try to formulate a plausible argument to prove that while plagiarism in literature, music, sculpture, and painting is most justly to be condemned and its practitioners ostracized, it is different, somehow, in architecture, and excusable, even laudable. Or let any two of us look each other in the eye like the Two Augurs and try to keep a straight face as we solemnly aver that our work is our very own, individual and original and, above all, that it is appropriate to our own moment in history and exactly expressive of American ideals and of the civilization of the twentieth century in the United States.

Pecksniff, you know, used to add a water spout to a pupil's design and call it his own. May I descend to the vernacular long enough to suggest that Pecksniff was a piker?

The Substance of Plagiarism

Call it by all the gentle names we may, call it adaptation, refer to it as we used to in a certain office after a particularly flagrant piece of cribbing—"the old man has been anticipated again!"—that which we commit daily and hourly is plagiarism; and the dictionary defines that as "the act of appropriating the ideas of another without due acknowledgment; literary or artistic theft." And you will not be surprised to learn from the same authority that a plagiarist is one who plagiarizes. I dare say we could distinguish grades of guilt, just as in law we have manslaughter, justifiable homicide, murder in the second degree, and just plain murder. Let us extract what comfort we can from any excuses or sophistries we may construct, let us point with a finger trembling with resentment to the august figure of Shakspere—the fact remains that the American School of Architecture of the present moment is essentially imitative, plagiaristic. I am not bound, I conceive, to name the exceptions which will confirm this rule; we may safely leave them to the apologists for the system.

There was a moment of great promise in the history of American design when it looked as though the influence of the genius of Joseph Morrill Wells would direct American thought toward a virile and fruitful eclecticism that would lead in its turn toward an architecture we could fairly call our own. Of all his work his last was his best and ripest. It is a fabric woven of so many threads of influence, visible and invisible, tinged with the memory of so many beautiful things, so subtly and cunningly wrought, controlled by so sure a grasp upon the technique of terra cotta, brick and marble, that it became under the hand of this lamented master a new and original work of art, respecting tradition but kindling a new fire from its slumbering embers. But Wells died in the very early nineties, just as the great wave of building set in, and in the rush to keep up with the demands upon the profession the photograph and the monograph began to exert their deadly, pernicious persuasion. The World's Fair in Chicago came on and turned our minds toward Greece and Rome, and another Classic revival ensued. There was no time to devise new and native envelopes for the many and diverse new structures that were to spring up over night; and so began that baneful abuse of precedent which from the expedient of busy hours became a habit, then a method, then was erected into a virtue, and here and now, after a long and prosperous career, is being basely assailed. Dear old Aunt Plagiarism! How sad it is to be betrayed by one of your old frequenters!

The Method of Plagiarism

We architects know the reasons for our parlous state. We know how driven we are; how little time our manifold duties leave us in which to think or to invent; how often we have to take the shortest road to a result; and how easy it is to drift. We know, too, the popularity of Follow-my-Leader in our profession. We know that after the issue of every new book upon some freshly exploited corner of Europe with measured details complete, an eruption appears upon the face of American architecture just as inevitably as certain people exhibit a rash after indulgence in strawberries. Every new building, foreign or domestic, is the signal for a dozen or more illegitimate offspring with a fatal resemblance to the responsible parent. When the book on the Grand Palais was published about 1900, the façade designed by Girault—a natural development by a Frenchman of a style indigenous to France, the Louis Seize—had an immediate and immense vogue here; straightway American design displayed flat oval cartouches wherever they could be handily hung, and ropes of laurel which suddenly left the light of day and burrowed into the solid stone to ooze out below somewhere and hang limp, exhausted by labors no laurel garland is really fitted to perform.

Three or four years ago some new books on the work of the Brothers Adam appeared, work exquisite in its

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delicate strength and refinement, low relief in ornament and restraint in its use, a style eminently suited to the domestic scale of its period and destination. Instantly there was the usual race to use this fresh ready-made material. It was considered a triumph of genius to make your relief so very refined and flat that unless you caught it in a cross light you couldn't see it near the sidewalk; and its presence at the top of a twenty-story building was a secret shared only by the architect and the birds. With a consistency one cannot sufficiently admire, our window reveals in buildings in the New York version of the Adam Style are becoming so slight that I for one walk on the other side of the way for fear a deep breath will pull acres of plate glass down upon me.

And just now in New York, because presumably of the notable success of a certain splendid bank building inspired by the Romanesque of Lombardy, there are signs of a coming epidemic of the crudities and *naïvétés* of the 8th and 9th centuries; and Christian symbols, the emblems of the four Evangelists among them, adorn buildings of decidedly profane significance—which is after all a kind of *naïvété,* isn't it? A sort of happy innocent, a don't-give-a-damnativeness that is enviable and rather charming.

Pillaging the defenceless dead is, one would think, bad enough; but what shall we say of the logical sequel, robbing the living, quite openly, without apparently any sense of its enormity, without a "by your leave or damn your soul or any other like civility"? I refer to the preposterous practice of using the several monographs that have appeared in the past few years, upon the work of living and practicing architects, as copy books in our drafting rooms.

If I had my way I should substitute for a certain unpopular amendment to the Constitution one forbidding the use of books and photographs to any architect after ten years' study of precedent and tradition in school or office.

I might go on and enumerate special examples of our favorite crime, our dearest vice, but I have said enough, I think, to indicate my meaning and your own memories will supply the omissions.

The Value of Tradition and Precedent

But perhaps someone is saying "What does this fellow mean? Does he ask us to forget the past, forget the history of our race and of our art?" Ah, no! He means no such thing. He is no iconoclast. He has a whole private Pantheon of strangely assorted deities that dwell together in amity, collected in the course of what is getting to be a rather long professional life. No one believes more ardently than he in the just and true value of tradition and precedent. He believes that art must develop much as language develops. No man having something to say invents a new language to express his new thought; he uses the parts of speech familiar to us all, uses the alphabet of his race, and with these simple elements in new combinations makes us burn or shiver, tremble or exult. Each art must respect the traditions of its past and develop new things with the old sap just as new leaves grow on old trees every spring. The leaf does not despise the roots hidden in the earth over which it quivers in the light of a new day. Mass and proportion, heights and widths, walls and openings, voids and solids, mouldings and ornament, light and shade, these are the simple elements of the language of architecture, capable of infinite modulation and variety, plastic to the expression of an individual temperament or of the genius of a nation.

In what I now feel to have been a beneficent pause in the pressure of professional life, the decline of practice during and since the War that afforded time for thought and appraisal, my thoughts on design have been turning, in a kind of intellectual and moral stock-taking, in the direction I am indicating here. I have been wondering whether it is possible to accentuate the vertical movement of a design if conditions of site, or light, or height, or use, suggest it, without its being Gothic or being immediately so labelled. May we not ourselves decline to think of it as Gothic, and regard it as the natural result of an economic condition, as the Gothic was of a spiritual? Is it possible to oppose to the strong light verticals of columns and their shadowy intervals corrective and balancing horizontal shadows without having what we do call Classic? Is it impossible, somewhere, sometime, somehow, to have what we do called just Architecture? Must we forever work in terror of the pestiferous maker of categories who lurks, paste-pot in hand, ready to clap on a label the moment a piece of work is done? Above all, may we not fool him by ceasing to design things that deserve all the labels he can plaster on them through a long summer day? May we not design an architecture firmly rooted in tradition, appropriate to its uses and therefore of infinite variety; free from freakishness as it is free of pedantry, from the timidity that shrinks from the responsibility of placing two mouldings in a certain relation unless toilsome search through the books reveals the glad fact that what we propose has been done before by some braver soul; or from that revolutionary and unbalanced temerity that would sweep the alphabet of our race and art into limbo and substitute for it some impromptu and illiterate gibberish?

Do any of you remember Zenobia, the heroic queen of colonnaded Palmyra, who figured in our childhood's copy books? What would be thought of our penmanship today if we continued to reproduce the correct but colorless Spencerianisms of that copy-book script? And what would be thought of our mentality if we repeated at frequent intervals as the staple of our conversation the statement "Zenobia, Queen of Palmyra, was an heroic Queen"? Might not our penmanship as that of mature men be described, by kind persons, as perhaps lacking in character, and might not our mentality with some show of justice be rated as a trifle limited in expression? Yet what, after all, are the columns and orders and details collected in Mauch and other compendia but the Spencerian script of school days? And the statement that Zenobia, Queen of Palmyra, was an heroic Queen, while a thrilling pronouncement in earliest youth, ceases to arouse a passionate interest after the first few hundred repetitions; but it is cognate to the old architectural platitudes we solemnly repeat as the phrases of our daily architectural speech.

I do not know of one architectural school in this country (and if I am doing one an injustice I rejoice in the exception and respectfully salute it) in which the basic elements of architecture are taught—to rpeat the figure already

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used—as parts of speech. Of course we have the famous Orders; but we hear little in elementary instruction of walls and how to build and use them, of openings and how and why to place them, of void and solid and how to span them and cover in these voids from solid to solid; of conceiving architecture, not as a succession of styles ready made to our use, but as what it really is—the arrangement and modulation of light, of shade, and of shadow. Guadet has been crying the secret aloud to heedless generations of students and teachers. Viollet-le-Duc long ago suggested the rational use of precedent in the study of a problem. And in literature, Stevenson in his 'prentice days, to use his own words, "played the sedulous ape" to the great masters of English, one by one, that he might penetrate the mystery of Style by a study of their styles; with the result that he formed a style of his own, rooted in the best traditions of the use of the English language, but so distinctive, so personal, that a mere fragment of it torn from its context is recognizable anywhere. But the present day draughtsman in America is helpless without a book open on the table before him, and a pair of proportional dividers to ensure the accuracy of his crib lest he be chided by us, his chiefs and superiors, for departing from the copy we have set him. In Paris we spend years learning to evolve a design from the intrinsic conditions of the problem without looking at a book; but the moment the gangplank is made fast to these shores we yield ourselves to the embraces of the siren Plagiarism, unfair yet not unlovely—and so delightfully easy in her manners.

May we not solve an architectural problem in terms of the elements of architectural speech, constructing our own phraseology, developing our own idiom, instead of repeating the phrases and sometimes the entire compositions in which the men of generations dead and gone have expressed the ideals and the modes of thought and living of civilizations long since passed into silence? Must our minds, until we drop doddering into *our* last long sleep, go instinctively first, not to architecture as just architecture, but to the thing represented by some qualifying adjective such as Spanish, Byzantine, Elizabethan, Colonial? Must we forever repeat the gestures to which the chlamys of the Greek, the toga of the Roman, or the hooded cloak of the Middle Age, are appropriate and graceful vesture? Is it impossible to be expressive, even eloquent, even beautiful, in that virile garment the American pant?

Please observe that I am not dogmatizing; I am asking. This is not a lecture, it is an inquiry. And my contribution to this occasion, like those you are very soon to be privileged to hear, is directed toward one single end and that end is the stimulation of thought.

For an American Architecture

Now, if ever, in the dawn of a new and different tomorrow, is the time for self-searching, for ruthless self-criticism, for high resolve and for laborious and sincere endeavor to cease stammering in alien tongues and to develop and to learn to speak plainly and clearly, eloquently and beautifully, the language of our own day, the idiom of our own civilization.

I do not propose that we should rush out from here and instantly, in the twinkling of an eye, change the character of American architecture. I have always pleaded with impatient laymen for time for our profession to find itself. I know that we cannot evolve a national art with a true native content and accent in a few years. But is it not time to make a conscious and deliberate beginning; to cease to drift; to cease to borrow and commence to pay the world the debt we owe it? If we were mere tyros there might be some excuse for us as there was for the men of 1890, for they had no such supporting background as that they prepared for us. We have worked out our own skeleton, native and American, but we continue to drape it in the costume of Harlequin, a thing of shreds and patches from the European ragbag, too indolent or too indifferent or too ignorant or too driven to devise new garments for it; and the children of our fancy, poor things, are forced to figure in life in the garments of their great-great-grandparents, cut down and made over—a process that fails to conceal their poverty. We could do better by them. I believe the American architect can do anything! But he is a captive in the squirrel cage of the styles; sooner or later, one by one, they all come 'round. If the styles would only die of fatigue and Style be born —and liberated!

For we have had a generation of design now. We are, as a school, sophisticated, even erudite—too sophisticated, too erudite—and there seems to be little sign of change in our ideals or methods unless a change from the style in which we make our buildings masquerade or from the man to whom we play the sedulous ape, a change from the delicate sophistications of the Brothers Adam to the crudities and quaintnesses of the Lombard Romanesque, may be considered change. Of course I am speaking just here of what is going on now in New York, the town I know best. If this latest wave has not yet swept beyond the Palisades that are said to mark the New Yorker's western horizon, fear not! It will! New York always gets these advance styles first—but I hasten to say there is no cause for jealousy in that fact.

Let us, in the silence of after-hours when every one else has gone home, or in the quiet of the office on a Sunday, sit down somewhere and think; remember our responsibilities as the pilots and guides of a new generation of mankind; pause to take our bearings, estimate the winds and the currents and our drift and so lay our future course that what we do shall shed lustre on this, our own, generation; that men in ages yet unborn shall say—There were giants in those days: creators, not collators, who gave richly but were too proud to borrow or to steal.

H. Van Buren Magonigle.

What is Precedent Doing to American Architecture?

In considering this inquiry it may be well for us first to agree upon what is a reasonable interpretation of the term Precedent as used in criticism and in the design of architecture.

A direct copy of the main features and details of an admired example does not, as I understand it, fall into the proper meaning of the use of precedent.

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WHAT IS PRECEDENT DOING TO AMERICAN ARCHITECTURE?

Precedent to me means form which has been accepted as the proper expression of good logic, fitness and beauty, proven by the test of time and accepted as a standard upon which new expression can be modelled and with which it may be compared.

The testimony of all history indicates that art forms grow like living things. They evolve from the simplest rudimentary ideas and forms, slowly changing to conform to changing environment, and eventually reach a climax which might be classed as perfection. This period of perfection rarely endures, for from it there is usually a retrogression and often entire disappearance.

In this evolution those forms have survived which, by reason of fitness and beauty, have captured the imagination of the artist, and by him are crystallized into new design to meet new conditions.

Such forms come into the category of Precedent as I understand the term, as clearly as the establishing of a comprehensive style, as for instance classic was the precedent for the Renaissance.

The Limitations of Precedent

While we may be safely guided by Precedent within certain limitations, there is a point beyond which our design, if too obviously influenced by the prototype, fails properly to reflect the true expression of the new product and of the individuality of the artist. Creation is not stimulated where there is direct copying of a Precedent, but on the contrary it is hindered in free expression.

For illustration, let us admit that the English revival of Greek architecture fails to reach that exquisite refinement of proportion and purity of form which the antique monuments reveal; we nevertheless admire and copy the adaptation of Greek ideas which we see in English domestic work. It is better suited to our needs than a pure Greek interior would be even were it designed by Ictinus or Callicrates, for we are essentially English, we are not Greek, and our architecture must and will admit that fact in spite of any rare exotic flavor with which we may try to adorn it.

Neither can we comfortably settle down in rooms of strictly French design. However admirable they are as works of art, they were developed amid surroundings not at all in harmony with our social life, and while we use them as models of beauty and good taste, we cannot copy them exactly, and successfully, to meet our own social needs.

Precedents must be in harmony with present ideals or at least be suggestive of agreeable ideas, otherwise they cannot be accepted as useful and inspiring for guidance in design. Forms admirable in themselves but not applicable to the problems of today are not useful to the designer.

While ancient Egyptian art was highly developed, we can use as little of its forms as we can of modern Russian architecture, because the forms do not fit our needs. Antiquity adds nothing more of value than does modernity, age not being an essential quality of beauty.

It appears that when it has served its purpose in the development of style to meet the requirements of new environment, Precedent is abandoned. The new art, being perfected, goes forward as the most important and logical expression of the new age.

In the time of Pericles, what was then modern Greek art was a higher type of art expression than anything which the world had seen, and it was natural that precedents were not sought for. In the age of Augustus the Roman architects were not scouring the world for precedents. When Roman art was young Greece furnished the precedents, and even the architects to use them, for the development of Roman architecture, but when they had arrived at their own style, they outgrew everything else, and the Romans, like young ambition, spurned the rungs of the ladder on which they climbed.

Whenever a nation seeks precedents for its expression in art, it by that token admits that it is not satisfied with its expression of art; that it is not contented with what it has accomplished, that it demands better architecture. It acknowledges that certain preceding periods in the course of civilization have reached a higher degree of cultivation in art. A nation showing these symptoms has healthy growing pains.

When America reaches her apogee in art we will probably show much less interest in the architecture of the past. In fact, we probably will have either copied all of it or bought it all and re-erected it in the United States.

Along in the early eighties a firm of architects in New York began to work rather closely to precedent. The buildings they designed were so much better than anything till then produced that, in spite of the cry of plagiarism, the entire architectural world began to study precedents.

Enthusiasm for the Colonial swept the country like a prairie fire.

Symmetry took precedence over the picturesque, withered *papier mâché* garlands curled up, glass bottle discs fell out of the stucco gables, round shingled towers lost their bannerets, and architects began to use precedent.

After the Italian Renaissance had taught the lesson of simplicity, dignity and scale, the transition in public buildings to the grand manner of the monumental school was an easy step.

Our public competitions now have the severity and stateliness of the Grands Prix de Rome of 1830. Extreme dignity and simplicity, with almost archæological fidelity to classic precedent, interestingly arranged, is a fair description of the winning designs in the majority of our great public competitions.

The precedent of the Ecole des Beaux-Arts has taught us method in our study of plan and composition. Our schools are training the student to design in sound classic styles which accustom him to beautiful forms while he devotes his energy to plan and composition.

He thus cultivates a sense of fitness and good taste, and when this quality is established he may then be original, but until then, unless he is one of those rare geniuses we discover occasionally, he would better stick pretty closely to precedent.

But we are no longer teaching only historic forms as the basis of design. Modern methods of construction and present-day requirements have developed new problems in design which must be reckoned with.

The struggle with the immature mind is to make it work logically, and at the same time to feel that there is something really alive in architectural design. We can

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train the student to draw, we can teach him to theorize, we can instruct him in history, and we can show him how to construct buildings, but routine instruction will not teach him to design. We can put all kinds of knowledge into his brain, but design has to come out through his soul. Design comes from that divine love for beauty, and the gift divine for its expression which is given but sparingly to the minority, and in fullness to only a favored few.

It is comparatively easy to feel something one must express in painting and sculpture, but really to feel it in architecture, and to be able to express it, is the mark of genius.

Some American Problems of Today

The big tonnage of building in America is not vitalized by architectural quality. It will be so vitalized only when judicious use of precedent is more widely accepted by the intelligent practitioner. He must build for convenience, he must build for safety, and his impulse is to build as beautifully as his quota of genius makes possible, but he will never create beauty by logical deduction alone, nor ever without precedent, and of these two sources of inspiration he will be far happier to see in the publications his creations from the latter than from the former.

Had the elevator been known in Italy in the year 1500 the tall commercial building would not now be a difficult structure to make beautiful.

Every tried experiment has so far failed to produce in a tall shaft, crowded with uniform windows and perched on a plate glass base, a type of beauty we can safely leave to the future generations as precedent.

It is, however, a problem which can be solved; a very interesting type it is, distinctly American, and in it are the elements of a strikingly beautiful expression of architecture.

The new Shelton hotel in New York suggests in a rather rugged way a spirit of design which is most inspiring, and it is one of many recent buildings which lead us to expect beauty in the skyscraper.

We expect the architect to begin his design by logically determining the facts, functions and general disposition of parts; but he should soon envelop these great hard facts in a web of design which he spins over them, concealing everything except the spirit of the design. When the facts are logically disposed we forget them, for in contemplating the design we see only the beauty of the expression, if beauty exists.

If the facts are badly composed we feel the trouble in the design, for they cannot be concealed.

What precedent cannot do is to guide us in those problems for which we find no prototype. We must, when we meet such situations, be guided by good taste and logic. All that precedent can do in such a situation is to recall to us beauty of form and composition. We must work out our own salvation in the tall office building, the skyscraping hotel, the many-storied apartment house, the subway station and the traffic tower. Our brave attempts to design the ideal office building conclusively prove the difficulty of creating a beautiful new and extraordinary thing without the guidance of precedent.

It is impossible for anyone to design an important building free from the influences of precedent. One always does use precedent consciously or unconsciously, and cannot free his mind from the impression made by buildings of which the image lingers in his memory.

If Letarouilly had published a twelve-story palace with each floor the same in plan and height of ceilings all alike, a water tank and elevator shaft on top, and with the dignity and charm of a Bramante masterpiece, and paying a 10% rate on the investment above all charges, including amortization and brokers' fees, medals for the best apartment house designs would have the value of the German mark. If Lepautre had thought of it he could easily have dashed off a traffic tower which would guide us to a complete solution of the traffic problem.

There are building problems arising from our modern ways of life for which we find no precedent. When such a problem arises we are cast away in the fog of uncertainty. We go on groping for a precedent. Fog horns all about us are resounding with warnings to be modern, to let construction show us the way to avoid the dead classic. Then we resolve to go on dead reckoning; we know about mass, about line, about proportion and classic detail. With these as guides we tackle the design. It is not easy work. Study goes on over study until the entire universe of form has been tried.

We are convinced that this probably would have discouraged Baldassari Peruzzi when all of a sudden we see a light! We have an idea! A brand new idea! We make a telling sketch of it and call our partner to admire. He looks it over, lights a cigarette, and says, "Well, it might do, but I never did care particularly for the things in that book; why don't you look in Later Renaissance in England?"

But is there not danger in relying for inspiration too much on what has been done in the good old days when everything had charm?

Do we show the right spirit when we are satisfied to follow precedent which easily fills the needs, instead of searching more earnestly for a design to meet each particular problem?

Is it quite fair to Piranesi to use his inspiring etchings of Roman ruins mechanically reproduced on tinted paper as magazine covers instead of honestly working out a thoughtful design which might reflect the contents and ideals of the publication?

Precedent is doing good to American architecture when it brings us back to good taste after the aberrations of those newly discovered American styles which bob up now and then.

The Effects of Precedent

The Lincoln Memorial, the Boston Public Library, the University of Virginia, and the New York City Hall, while original designs, are founded on the truths laid down in precedent.

Precedent is changing the redwood jig-saw house of California into that semblance of solidity seen in the masonry construction of Italy, Spain and Mexico, and the plan into a logical and luxurious arrangement with court, arcade and balcony, delightfully picturesque and rambling; the kind of villas with stucco wall and tile roofs we see on the hillsides of Italy.

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Precedent is guiding the design of luxurious midwestern homes toward conservative originality which has marked character and beauty, and the broad flat well-wooded areas available in that fertile country are converted into landscape gardens of a distinct and handsome type.

The precedents inherited in the houses built by our great-grandfathers is disposing masses, purity of detail and good taste in furnishing the modest dwellings.

The public is in sympathy with the work based on precedent. Good architecture is demanded and appreciated more and more each year. There was never in the history of the world such activity in building as there is now, in America, and there was never before such a high average of useful, comfortable and agreeable buildings as we now inhabit. Our mechanics enjoy comforts denied the King of England when the precedents of our popular domestic homes were in the making.

With all the intelligent effort now directed toward better architecture, and the vast experimental laboratory the building industry affords, it seems reasonable to expect and cherish the hope that some day, before the coal beds are exhausted and the sun spots turn off the light, the effect of precedent may lose its potency for guidance, because we shall have attained the goal toward which all eyes are turned, a beautiful, logical, modern American style of architecture.

WILLIAM A. BORING.

The Value of Precedent in the Practice of Architecture

In the words of the cautious Mediæval Schoolmen, *"Distinguo."* The question is not one that admits of a categorical answer. "Value," where, when and to whom? All is relative, even Revelation, and wise men knew it even before Einstein—about 2,000 years before, or earlier. Precedent was of little value to Anthemius of Tralles, to William of Volpiano and to Suger of Saint-Denis, but it was the stock in trade of the protagonists of the Pagan Renaissance. If civilization has unity, beauty, the spirit of adventure, joy in life and *faith,* one need not stop to think about precedents, or seek them out. Beauty and significance will pour into the world through the arts, and the artist (all free men then are artists) cannot help himself. If civilization is chaotic, ugly, fearful, unhappy and infidel, precedent will be called on at every juncture—but it will do little except add plausibility to artifice. If I have to create a monastery for Benedictine monks, precedent is what I must build on, but if the problem is a movie theatre, a Christian Science temple or a storage warehouse for confiscated "hooch," precedent is measurably ineffective as a stimulus.

I protest that the customs of the past, whether they did or did not rely on precedent, and how much or how little, have no bearing whatever at the present time. However varied the types and phases of civilization, they all hung together, they developed in a sense one from another, possessed actual identity in their sense of major values, from the time of Pharaoh Akhnathan to that of the Emperor Charles V., but what we have had since is a new thing with neither resemblance nor relationship to what has gone before. If there was civilization in Egypt, Greece, Rome, Byzantium, Moorish Spain, the Middle Ages, the 15th century—and God knows there was—then we have it not, and if ours is a real civilization then there has been none before. What we are involved in today is a brand new creation brought into being by coal, steam, printing, gunpowder, Protestantism, neo-Paganism and democracy. The question is not whether it is good or bad; it is indifferent, lock, stock and barrel, and because it is so blazingly, so staggeringly different, it sets itself apart from all history and must be dealt with *de novo.*

There have been eight great art-epochs in the history of Europe, each the perfect expression of a civilization that varied in degree from the others but was always notable and sometimes supreme. In every case there was was at root these qualities I already have catalogued: unity, beauty, spirit of adventure, joy of life and faith. The present time is marked by the opposite of each one of these qualities. The result is spiritual, social and material chaos. In each one of the eight epochs I have named the creative artist was driven by the dynamic of his time to do what he did and he needed to be taught nothing but his craft. He was not driven to deny the high gods or break the Ten Commandments in order to achieve "self-realization," he was modest enough to know that the same "self" was probably not worth expressing anyhow, and of slight interest to his fellows. He had a bigger thing to manifest and that was the corporate soul of the time. This was the impulse, the form followed by nature.

THE PRESENT-DAY MOTIFS

And now? Well, what have we for inspiration? What are the great, universal motive forces of society? Passionate desire (generally satisfied) to own an automobile, a Victrola and a radio set. A deep yearning for the movies, jazz music and really good bootleg gin. In place of the beautiful gods of Olympus and the kindly shy spirits of the woods, or of the Sacramenta and splendid worship of the Catholic Church we have the Fundamentalists, the W. C. T. U. and *Zion's Herald.* Where once were argonauts and Crusaders and Conquistadors and merchant adventurers, are now big business, high finance, efficiency experts and advertising. The craft-guild and artist-guild have given place to the predatory trade union, the Rotary Club and Odd Fellows Hall. Congress and the State legislature and the city council and the ward boss have ousted statesmen and patriots and great leaders of men. Main Street triumphs over Thebes and Athens, Venice and Mont St. Michel and Bruges, while George F. Babbitt sits in the high places of Pericles, Dante and Sir Thomas More.

This sounds like an indictment, but I mean it for a description, and its object is the emphasizing of differences. Of course we plagiarize, barefacedly, because at present there is little else we can do, and just because of this difference that exists between our own time and the others that have gone before. There is no longer any group of powerful influences dominating society. There is not even one (if we except safe evasion of the Vol-

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stead Act) and it is out of these universal impulses that styles derive, not from the genius of one or more great artists. This I believe is absolutely true of architecture and measurably true of all the other arts. Is there any style on earth prior to that of the Academic Renaissance that we can trace back to a specific creator? Great names gleam in each, but every one shines forth after the style, whatever it is, has reached its full development.

The reason is not far to seek. Art is, in the second degree only, a medium of self-expression, varying to a certain extent between one art and another. Music, poetry and the drama are the most personal and the least dependent on spiritual and physical environment. Painting comes next, perhaps, but here the universal force takes greater control. Sculpture is in the next place, and last of all comes architecture, the great art of communal expression where the personality of the architect is of least importance and in many cases a positive intrusion. I do not mean that here personality is of no moment; it is of great moment, but I do mean that in great architecture the architect must be rigidly subordinated to the art, the art subordinated to, and made expressive of, the time, or if, as happens now, there is no coherency in the time, then to whatever spiritual force may be operating through the concrete thing the architect has to house, and so housing, manifest in visible form, beautiful, significant and inspiring. Plagiarism is condemned in masters of other arts and they generally refrain from it.

Wherein Architecture Differs

The dear man who has started this trouble asks that it be condemned also in architects, but I maintain that here also is a difference, for the revelation of personality that is tolerable, nay, even desirable, in a Debussy, a George Bernard Shaw, a Cezanne, an Amy Lowell, is not a desideratum in the case of an architect. We do want to feel, rather unconsciously, the varieties of genius between, say, the master-builder of Bourges and him of Seville Cathedral or Westminster Abbey, but only in subordination to the great force that was driving society when these churches were built, and to which the nameless, unchronicled builders bowed the head. So then, we have (from my point of view) two differences conditioning our problems; the complete loss of unity and driving force in our society, and the fact that the architect deals with an art so great that it subordinates personality and makes him dependent on this very unity, this irresistible driving force that we have lost.

Stated so, the case seems rather hopeless, and yet we know it is not, for in spite of plagiarism—or is it because of it?—we all know perfectly well that there is more really good architecture being produced in America today than ever before, and far better than that of any other country in the world for the last 300 years. Evidently there is a fallacy somewhere (I deprecate attempts to find it in my reasoning) and I think it lies just here. In spite of the fact of our heterogeneous estate and the inadequacy of the personal equation as a substitute for world forces, there do still remain enclaves of substantial unity, potential energies blurred to the sight by advertising signs and silenced by the thunder of the moron, the demagogue and the "blurb," but nevertheless real, potent, vital; and it is these forces that are acting as of old to inspire the architect and make him a creator, or rather a channel of artistic revelation.

Three Architectural Examples

Let me take three examples. The first is the human family. It is as old as the Garden of Eden—or just after it; it is not a new thing needing a new form of expression. I grant you that if trial and eugenics and the divorce courts and "the need of self-realization" have their way this statement will be no longer true—but in that case it will not matter, for society will come to an end and with it architecture. In the meantime, and in spite of the newspapers, the real home still exists, and it is finding its perfect expression in our domestic architecture. I do not know when there was any that was better than what is now being done around Philadelphia, and in southern California, and by groups of architects in New York, Boston and the Middle West. Did they fall back on precedent? Yes, they did, because it was their business as good and faithful architects to do so. Did they plagiarize? No! they took over the old motives, Colonial, Spanish or what not (frequently the latter) and transmuted them into something more than adequate by feeling the push of the inspiring force of the decent home and then by adding just enough of their own fine and varied personality to keep their work from becoming standardized like a schoolhouse, a bank or a Carnegie library.

The second example I would choose is that category of building that is associated with real learning. The sort of efficiency expert, pre-digested learning engendered by H. G. Wells and hypothecated by a myriad other compilers of "Outlines" of this, that and the other, has rather of late overshadowed the real thing, but still it exists, though hiddenly. When this real learning becomes operative its creative energy comes into play and again the architect has something to express except his own sacred personality. Does the demand for originality, for the striking out of some new style come here into play? I think not. If I am working at an old university, where the scheme of education, the scholar spirit, the cultural tradition reach back without a break through the Colonial college to Oxford and Cambridge and the mediæval centers of learning in Europe (as they do, all of them) I know that my business is to subordinate my own fads and fancies to this dominating influence, to pick up the old tradition of college architecture that belongs to our race and then adapt those forms, so recovered, to whatever new conditions may have come into being and are not in themselves inconsistent with the central idea of higher education. Where should I go then for inspiration (I do not say precedent) but to the great old work of our own blood-ancestors in Oxford and Cambridge, or to the allied but racially alien art of Salamanca, Heidelberg or any other great college of the great days? Nor does this mean just Gothic; there is good Georgian building in the English universities, and good Renaissance in Spain, if, as sometimes happens, the Gothic mode is unfitted for a particular temper or place. To precedent architects have returned at Princeton, Yale, Harvard and scores of other colleges, and there is no

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more vital modern work anywhere than they have done along this line—and without plagiarizing, rather by an intelligent and sensitive adaptation that has made Gothic and Georgian and Colonial living styles again. "Out of key with Modernism"? Yes, thank God, but right in the key of the greater and lasting forces that are here cherished and preserved.

And the same is true, though in a less degree, of libraries. They have been popularized to the point of saturation with "best-sellers," newspapers, "success" and "go-getter" magazines, "outlines" of every known thing on earth and pre-digested literature generally, but still the old, that goes back to Alexandria, still lingers, and occasionally something is done that is supreme; the Indianapolis Library for example, to quote only one, but a salient, instance. Study this building if you want to see the value of precedent used intelligently and with a creative spirit.

And my third instance is church building. Here, even more than in the other two cases, is a dynamic, persisting spirit and tradition. There are many styles, but there is one motive, and I submit that here at least not only must inventiveness be held in restraint, the individuality of the architect submerged, but that there is no other course to follow but to preserve continuity, suggest unbroken history, stimulate by the emotional appeal to inherited elder memory through suggestions of ancient and unparalleled monuments. In other words, go back to the great architecture of the great days, and start there, going on, of course, but only by modest stages and in restrained ways, never, under any circumstances whatever intruding individual personality into a thing immeasurably greater than any individual. Is there any better architecture today than church building in America? I do not think so, and it is good just because it starts from the old work, frankly and reverently. What happens in church building when the start is made from nowhere, except the inner consciousness of the inventive architect, is quite clearly demonstrated in France where modern churches are a scandal to religion and a shame to architecture, though the most offensive example is to be found in Barcelona where a megalomaniacal moron has started a nameless horror sacrilegiously dedicated to La Sagrada Familia.

So I rest on this: that there is no longer a vital, inspiring, directing energy in the world that achieves its outward showing in great art through its sensitive agents —the architects and other artists, and that since this is so, it is a great mistake for us to think that we are big enough in ourselves to contribute what the *zeitgeist* withholds. If you want plain speech, we are not big enough men to do it. We are not great in the sense in which the master-builders of Athens and Constantinople and Venice and Burgundy and Spain and the Ile de France and England and Flanders were great. We know more than they, infinitely more—except as to what things are worth knowing. It isn't our fault; we work as hard as they and with equal devotion and sometimes equal prayers. The trouble is—"the hungry sheep look up and are not fed." We would give our lives, and perhaps even our souls, if only we could breathe in the same divine inspiration that filled the air of Athens, Paris, Siena, Salamanca, Oxford, instead of the effluvia of glutted cities, the smoke of the black country, the crash and war of factories, the bad air of politicians, the dirty propaganda of newspapers.

But—and here is the saving fact—the real spirit, the inspiring breath, still holds in places and here, if we will, we can find the breath of inspiration we need. Not to invent some new thing like a carburetor or a religion or a philosophy or a new architectural style, but to recover the truths of old arts from their forms and the spiritual radiance that emanates from them and modestly, humbly, try to recreate these forms, not as final ends in themselves, but as recovered truths after long night, facts to hold to, foundations to build upon, landmarks in the great adventure wherein we, even we, may play our part in recovering right values for the world and bringing it about that in the end they shall prevail.

RALPH ADAMS CRAM.

The Use of Precedent in Architectural Design

The use of precedent in architectural design has always existed in some form. The historic "styles" were the product of the "common mind" of men who believed in the same gods. They became established through a natural process of development. They were followed because they were the logical result of the interplay of the thought and emotion of the time. Precedents were established and used, not because of rules and regulations, but because the solution of architectural problems seemed inevitably to follow a flow of dynamic force that would not be denied.[1] Given the terms of the problem with its modifying conditions, given the designer with his background of faith, tradition and training, and his equipment of imagination, emotion and skill, the result had to be just what it was. Though he did not originate the "style" in which he worked, he usually enriched it by some contribution of his own. He used his own creative faculty. He did not borrow in a plagiaristic sense, though he freely had recourse to the treasure chest of the "common mind" of his age. This use of precedent I think we may call subjective, as distinguished from mere objective copying.

Doubtless always there were imitative followers, pupils of a great master, mere imitators, who did their work in a servile and imitative way. It was the genuflection of the ape-like mind before superior genius. Such imitative work has always been a natural accompaniment or "obbligato" to the brilliant performance of the freer-minded. We note the same phenomena in the other forms of art expression. Every great master, whether of painting, sculpture, music or literature, has had his pupils, admiring disciples, envious rivals. Great schools of thought or cults have arisen through pure force of genius. They have attracted similarly-minded students and workers, have established themselves as dominating forces in their

[1] Where convention was established by law, as in Egypt, the "style" had lost its first spontaneity and had become more or less institutional.

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own particular fields of expression. Later we have seen them become arid, or overwrought, stiff or spineless, forced or anæmic, in a word, decadent; and they have passed and yielded place to more virile and spontaneous movements. The merely imitative use of precedent we may call its objective use, for it consists essentially of taking the externalized thought of someone else and substituting it, in whole or in part, for one's own. I think it may be demonstrated that the predominant use of precedent in any age which produced an architectural language of its own was what we have defined as its subjective use.

Since the time when the brilliant revival of classic thought and form which we call the Renaissance began to lose its lustre we have had no new architectural language or "vernacular." The use of precedent has enormously increased. It is urged and taught, not always explicitly and formally, but quite deliberately and with no little skill. The result is that the point of view of almost the entire architectural profession is now an attitude of deprecating any attempt toward free art expression in our own field. We sense a belief in the minds of our teachers that the best possible has been already done. As students we are first required to copy. A little farther along the way we are expected to begin to "design," but when our work is reviewed by the instructor we soon find out that the closer we stick to precedent the higher he will grade us. When we get into an architect's office we find the "library," with its thoroughly indexed "plates" in constant demand by the designing "force." We note the "designers" are mostly skilful cribbers and adapters. We feel that they are really plagiarizing most of the time. They are using precedent-objective, and I submit that the custom is wrong in theory, bad in practice and utterly demoralizing in its tendencies.

Whither Leads This Road?

In our occasional moments of humility and absence of professional pose some of us admit that we are traveling a road that leads nowhere so far as art is concerned. I vividly remember a conversation which I heard in the drafting room of a firm of architects who were prominent 25 years ago. A client had gone away dissatisfied after a rather heated interview with the two partners. He wanted more windows and had been definitely informed that no more could be had. It would "spoil the design." As the door closed on his indignant old figure the senior partner said to his junior: "Well, that's what you get for trying to make a modern museum out of an old Italian palace." Nothing was done about it so far as I am informed. There was no dispute in the office about the principle involved. It was understood by the firm and by their draftsmen that they were working in a particular "style" which had rules that could not be broken unless we could find a "plate" in the library which would establish a precedent for the desired infraction. We were laboriously contriving a modern building out of modern materials which we first had to translate into 16th century forms. We were being scholarly and erudite. We were setting up something according to rules which regiments of students could later on recognize bit by bit in terms of scholastic analysis. It was cold-blooded and inhuman. There was no thought of doing something that might arouse enthusiasm, joy, delight. And whence the blight? The preconceived idea, the basic error in muddling the problem by referring it to a dead past, the objective use of precedent was what did all the mischief. That particular building was built and among all the devotees of precedent, for whom it was built, there has been not one that I know of to praise it or to rejoice over it. As for people generally, they think it is big and cost a lot of money, and they would be surprised if anyone seemed disappointed in their lack of interest or enthusiasm over its architectural fidelity to long dead Guelphs or Ghibellines.

Just two little points were raised by that client (and he did not know how to fight successfully for them)—utility and convenience. Utility and Convenience are humble servitors in the court of Beauty, but they may not be safely ignored, for they belong there. The theory of architectural design which does not adequately provide for them is a defective theory, to say the least.

When corporations, such as banks and insurance companies, wax rich they usually get themselves housed in a building expressive of their opulence. The typical instance is that one where the whole idea of architectural design seems to have been a lavish display of a classic "order" in cut stone. Precedent has had its way with these also. Few of them excite the beholder. It would not be severe to say that most of them are merely dull and conventional affairs. But they all cost a lot of money. Isn't it a fact that it is in this type of building that the architects' sway is least disputed? Have we ever thought a selfish little thought of regret that by this kind of work we have taught our rich clients to believe that architects are extravagant and architecture expensive? May not such buildings be the chief reason why engineers are so often employed to design the merely utilitarian structures? Have we really done anything to correct the erroneous impression that an architect merely adorns the engineer's fabric? Have we tried to demonstrate that it is ours to put a soul into the dry bones designed by the engineer, and, if so, did we find that our slavery to precedent helped or hindered?

We know also that many buildings exist where the exterior treatment has none but a vague and general relation with the interior and with its plan. The use of precedent had so prejudiced the thought of the architect that before he began to draw he knew how the building would be obliged to look. If it were a bank, it would have to be a Greek or a Roman temple. If it were a library, it would have to be a French or an Italian palace. If it were a building for governmental purpose it would have to have a great colonnade with flanking solids and perhaps a dome. The formula would vary according to the school and the habit of mind of the architect, and the necessary reaction of those who would pay the bill. But there was always a formula, and because the terms of the equation were not complete the solution was always a makeshift and an evasion.

The use of precedent in types such as we have briefly considered has completely overshadowed all the other elements of architectural design. The personality of the

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architect has practically vanished and in his work there is nothing that speaks of the spirit of a people or of a locality save as reminiscent in a pessimistic and ghostly way. At best the original beauty that dwelt in the buildings from which these are stolen is here only in the same unsatisfactory sense that it exists in any copy of a work of art. At worst the original beauty is gone and all that is left is a sense of the unintelligent use of forms alien to the purpose in hand.

From the lowest of motives, selfishness, can we afford to let architecture be so misunderstood? We have taken away her torch and have arrayed her in a masquerade costume and ornamented her with the trophies of our scholastic research. Can we wonder that "the public" is not interested in such performance? When architectural design shall have definitely ceased to be anything more than skilful adaptation, then shall architects, by their own admission, cease to be artists, and architecture as an art-expression shall terminate. But I suspect that when that day comes, and perhaps it is nearer at hand than we think, the primitive impulse to create and to build will somehow produce new servants. They may not call themselves architects but their work will unite them to that fellowship with the poets which we shall have forfeited.

The Process of Schooling in Precedent

That old idea that an architect is, or ought to be, an artist lies close at the root of our difficulty. If we formally renounce it the whole trouble clears up. There is no force in any argument against standardizing the whole works and copying everything. If we are not artists who can do aught but praise if we follow the line of least resistance and devote our whole energy to reducing the cost of production, which copying certainly does? But somehow the old idea persists, and though some of us ignore it and some assume it, jackdaw-like, others of us are worried about it. It is more or less believed by members of the profession and people generally that an architect becomes an artist when he becomes an architect. If we could only abandon that superstition "once and for all" we might be able to start all over again and get somewhere. The trouble started early. We studied art or thought we did. We really took lessons in drawing or painting or clay modelling.

And then we studied architecture. We were made to suffer mental indigestion when it came to the study of the work of past ages. We were crammed full of it. We were overwhelmed by it. As Louis Sullivan said: "We were taught hero-worship but not what the heroes themselves worshipped." We were kept so busy drawing and memorizing the highly developed forms which building materials had assumed under the hands of the long dead master-craftsmen that no time was left for an attempt at our own interpretation of the nature-forms which suggested all the art forms that ever were. Nor did we sense much of the nature, substance and limitations of the materials with which we would some day have to deal. Nor did we get any real insight into the way the actual work would have to be done after we got through drawing the picture. Worst of all, we were denied in most cases any hint of the joy and delight which must have gladdened the heart of the masters when they created the buildings whose "pale presentiments," like pictures of dead butterflies, were passed before us.

When we were graduated we had acquired a smattering of a great many subjects but that we had any real authoritative grasp of the fundamental and vital principles of architecture may be seriously questioned. Many of us had not even acquired a personal "touch" or technique as draftsmen. And yet we were graduates from a course in architecture. I wonder what the effect on architecture as we know it would have been if we had been merely passed with satisfactory evidence of having taken a course of study leading *toward* architecture. Many a man whose diploma gave him courage to essay immediate independent practice might have hesitated. The men who had to "make good" in independent practice without an opportunity of an apprenticeship in the office of a master of the profession were forced to draw freely on "precedent," for they had nothing else. Mastery of design cannot be taught in school. It must be self-acquired by years of work under the guidance of some one who is *teaching* by *doing* the thing taught.

In the schools of music so far as I know no student is ever given a certificate or diploma as a composer. He is frankly made to understand that he is first a technician, a skilled performer on the instrument of his choice. Next he is told that by virtue of his study of the best work of the masters he has acquired a musical background. Then he is made aware that because he himself has demonstrated that he possesses the love and understanding of music in his soul he has a right to call himself an authentic interpreter of the great works of others. He has also studied the laws of harmony and counterpoint. He understands the structure of the fugue and all the other variants of rhythm that enter into modern music. He knows the ordinary range and limitations of the voice, the violin, and all the rest. He may undertake to arrange music for the orchestra. He may "give lessons," perform in public, become a professional musician. But if he ever becomes a real composer doing creative work in music he does so by the grace of God and his own untiring effort. He was never taught "how" in any school. Nor, on the other hand, was he ever discouraged by anything taught from making that goal his ultimate aim. Never was he told that music as an art form was finished, that the best possible had been done. Never did he have to listen respectfully while some learned professor told him how to design a sonata in the "style" of Beethoven, how to "do" a little string quartet in the manner of Haydn.

Music knows how to make use of precedent, certainly, but so far, thank God, its use has not seriously threatened the life of musical art.

Who Makes Artists?

The analogy that exists between the various forms under which we know art is very intimate and real. Mr. Joseph Pennell had a story in the London *Times* not very long ago about his teaching the graphic arts for the Art Students' League. He told about how he does it and what he is endeavoring to accomplish. Let me quote from a review in *The Freeman*:

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"According to his theory, it is the Lord's business to make artists, not his, and if the Lord wants to make an artist of any of his pupils well and good! That is the Lord's affair; it is Mr. Pennell's business to make him a craftsman. Mr. Pennell puts in paragraphs about the characteristic American indifference to craftsmanship, that ought to be learned by heart by every 'art-student' in the land before ever he be permitted to touch a brush or a pencil."

Mr. Pennell does not believe that any one may be taught in the ordinary and formal sense how to to be an artist. I think that he is right. An artist must be self-taught. His being or not being an artist is a condition of existence and accomplishment to which he attains by more or less painful effort. In the schools we are trying to teach young men to *be* architects with all the connotations of artistry that are implied in the noblest traditions of the name. It cannot be done. We have been forced in striving to do it to substitute the shell for the kernel, to be content with merely attempting to teach how other men have done their work. We have had it to do at second—third—nineteenth—hand. We have not worked with the masters in their ateliers. We have taken the work they did, pulled it apart and are trying to use the pieces to produce art.

If we use precedent as it is used in the study of music, well and good. If we use precedent as it is used in the study of literary form, also well and good. Our mistake lies in allowing our use of precedent to crowd out of consideration, in the final result of the system, all that we understand by the spirit of art.

The reviewer of Mr. Pennell's article said: "Every word that Mr. Pennell says about the graphic arts could be taken over bodily and applied to American studies in literary art." I think it could be even more forcefully applied to American studies in architecture. We need a Pennell to review our curricula and to re-name the subjects taught and their results upon the pupil.

The Editor of the New York *Freeman* on the same topic remarked:

"I have often wondered what I would do if someone should come to me in my office some morning and say, 'I am a first-class literary craftsman. Give me an idea, and I can give it the best possible literary expression. I can spell. I can punctuate, on the simple principle that punctuation is to help a reader to get the sense of a sentence. I can use the English subjunctive and the conditional sentence. I know the history of the language and the values of words, and I can differentiate among synonyms. Moreover, I have the craftsman's feeling for the language. I have his intense love for it; and this gives me a craftsman's resourcefulness and flexibility so that my use of it is not a mechanic's use, but a craftsman's use.'"

"If such a thing happened to me," says the same Editor, "I think I should faint. What is the use of attaching importance to the 'creative work' that is being done here in literature, when there is, in the first place, no body of critical opinion to give direction to creative work, and no craftsmanship to give it shape?

"My complaint, like Mr. Pennell's, is of people who think craftsmanship is low, and of the schools that let them think so. I declare, I believe that American schools teach everything about the English language except what to do with it. At least, from the kind of thing I see, one would say that literary craftsmanship had gone out for good. When criticism brings it back and another generation of writers is imbued with the sense of it, we may have a prospect of some good literature. Until then, however, I for one am not holding my breath in expectation of any great things from creative activity."

Here is a man engaged in professional literature, journalism, who complains that there is no hope for creative work in literature because of the lack of thoroughness in the training which must be its foundation.

Post-Schooling

If we take away from our architectural courses of study the idea of "advanced design" and substitute the idea of *advanced craftsmanship* we will have kept the student mind free from the demoralizing influence of titles and degrees conferred before they had been fairly earned. We will have to provide for the further training of the student in our offices, and the thing will work to the advantage of both student and teacher. The student will be taught architecture by an architect. What he acquires will be his own in a real and personal sense, not possible in the class room. He will enter the office with no preconceived false notions of his own personal ability and attainments. Because he is unprejudiced and because he knows that he is still a student he will carry into an office a far different morale from that produced by the annual influx of half-baked young designers of fabulous projects whose first impressions of an architect's office are disappointing, discouraging and hopelessly prosaic. With the young men ours to mould our offices will continue to turn out buildings of the standardized cut-and-dried type only if we ourselves deliberately will it so.

Whether or not we begin again to work out an architectural language of our own is relatively unimportant. We cannot do it alone. Architecture never "followed a flag" nor was it ever confined by political boundaries. Our nation has less chance of a national architecture than any other country in the world. We are both cosmopolitan and provincial, broad-minded and bigoted, religious and agnostic, believing and cynical, everything that ever was, all mixed up together. We have agreed to disagree on every vital question known to the minds of men. The architectural resultant must needs be unharmonious, utterly lacking in homogeneity. Let it be so, for time, not we, must take care of that. But that does not justify an apathetic acquiescence on our part in a system of architectural philosophy that condemns us all to a dreary school-book ritual of a dead art-language. Nor does it justify us in failing to encourage the few among us who are brave enough to abandon precedent and speak in terms of present-day building unrelated to remote periods of time.

Some one has said: "The road to perfection is sighted when forces of Nature are consciously employed." If we love architecture let us give that love a fair chance. Let us not limit it to the colorless pleasure of imitating a dead man's work. Let us at least expand it by the earnest attempt to do our work in the spirit of the men who have gone before. We cannot break with the past. We must enter into our heritage with sympathy and understanding, and we must also face the facts of the present with sanity and clear vision. In our use of precedent, for we *must* use it in some natural and transitional way, let

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us invoke it subjectively, logically, beautifully, not objectively, unreasonably or slavishly.

The architect in his effort to gain bread and butter has to face a number of grim realities which tend to make him forget the poetic responsibility which is his by virtue of the place which he occupies. If we are false to the heritage of the past, if we are going to fail utterly in keeping the torch of beauty flaming in the land, if we in building shelters for the body forget all about men's souls and their natural instincts for "the things that are lovely and of good report"—

But this is not a sermon. It is not even an argument. It is intended to contribute a thought or two toward problems which, if we do not solve them, will await the passing of a dead profession and the birth of new minds and a new Time Spirit. Let me read for you a poem by Clare Shipman which it seems to me has a symbolic bearing upon this discussion:—

The Figurehead Speaks

"I am the figurehead upon your ship.
With swirl of winds in garments and in hair,
Mute, steadfast, making there
My plea for Beauty.

Infinite waves and tempest, terrifying, black,
Have broken on my breast and fallen back,
And though the sea has whipped my courage white,
Face to the gale beneath your sail
I ride with moon and tide.

You know me there . . . you saw them
That young day they lashed me in my place
And we set sail so bright and brave for stranger lands,
You, who work always with the ropes, the tiller and rude sheets.
You know me there, carved like a silent thing
Upon your prow.
It takes the whole of you to man your ship.
The work is to the worker, and the lash of toil
As ruthless as the lashing of the sea.
The work is to the worker and the skilled,
And I, deep in my rigid breast, dream on
And keep the faith.

Is work enough? What of the dream, O Pilot,
That folds the tender rose of cloud and coral,
The glory when the sun drops in the sea,
The emerald and the sapphire and the flame?
The scent of tar and oakum does not hint
Of fragrance in sweet gardens of lost isles.
You know me there, but if the sea,
The Monster Mighty which we serve should take me,
How would you know me gone?
I hear your hurrying feet upon the decks of action,
And I dream on and wait. You cannot answer now.

Think you, O Pilot, when the storms are done,
That we shall sail through friendly, purple dark,
With lights and bells, to quiet anchorage,
And wake where silken waters silvery lie
Bright shimmering in the sun?
Will you then rest untiring arms
And swinging down, lean till you see my face
Back of its tempest-scars?
I shall forget the sting of bitter spray
Which long has drenched me clean,
What of the dream, Beloved, what of the dream?"

WILLIAM L. STEELE.

What is the Use of Precedent Doing to American Architecture?

Discussion of architectural precedent—its use or misuse—has gone merrily on since time out of mind. If it be futile to expect that it will ever end, at least one may hope that architectural design may sometime more certainly justify the one, and suffer from the other.

Such outright copying of others' work, in whole or in part, as American architects do, would certainly condemn its perpetrators as plagiarists, were it paralleled in other forms of art. Yet the practice wins the highest praise, and begets a naïve wonder on their part that the public lacks interest in its results. Even mild objection to it seems to stir apprehension in the minds of those who put unfailing trust in the use of motives and details invented, or copied in turn, by architects of other periods of the world's history.

Architecture and the profession of architecture would, I believe, win greater authority and command a greater popular interest, if this apprehension were quieted—if the work of architects, who deny the authority of formal precedent, was judged with sympathy; if it might be thought to aim for the same goal as that of their critics—that goal which is pleasing form, proper use of materials, fitness of ornament, harmony of color, appropriate scale, dignity, simplicity and convincing character.

I know of none who disregards precedent in its explicit forms, who has not felt the thrill and been inspired by the beauty of the great architecture of the past, nor of that of alien races; none who has not sought therein the secret of fair proportions, delicacy, power, unity, quaintness or grandeur, and has not striven to vitalize his own work with the essence of those qualities—but in such a way that they shall speak of our own time, rather than of ages past.

They have courage who undertake a new expression, which, since unfamiliar, they are aware is little likely to be gladly received by those with whom popularly accepted judgments customarily rest. They support a great purpose who, recognizing "the simple force of need as an element of beauty," attempt an architecture that will, as they think, more truthfully, if not more beautifully, interpret our own thoughts and aspirations.

Perhaps a free and easy borrowing from others' work does more accurately portray our present bent. We find little time in which to perfect our deeds. We are slaves to haste and imitations, and strangely confuse the superlative with superiority. We seem to admire *big* things, *swift* things, *loud* things, *elaborate* things. That, after

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all, may be an unconscious expression of our national genius, whereas any other practice may be but prophecy of a changing spirit. Suppose we consider our general habit and judge how, in other relationships, it might be regarded.

Reasoning from analogy has obvious defects as a mode of argument. It seldom is convincing. But sometimes it awakens reflection as closer logic will not. Are the analogies between architecture and painting, architecture and sculpture, music or poetry, close enough to impress us with a proper sense of what freedom in architectural design might be like? Would not one more apt be found in a field of creative effort hedged about by limitations similar to those which surround architecture—limitations inherent in the nature of the product?

Architecture, unlike painting, sculpture, music and poetry, seeks an æsthetic expression of a practical condition. Whatever the limitations of mediums used in forms of art other than architecture, the artist is bound by none other, external to himself. His art is an expression of emotion, calculated to awaken an emotional response. But while architecture may awaken an emotional response, it must give expression to a practical idea —must solve a practical problem—must meet requirements of a utility. To arrest attention, even where habit has not already dulled perception, an analogy taken from a fresh field—one where the requirements of utility hamper the artist—may be more likely. For the purpose, I propose the analogy of the automobile.

The Parable of the Automobile

About 1895, the automobile manufacturer—all unconsciously, no doubt—was holding fast to precedent. He was producing the "horseless carriage" after the pattern of the narrow box buggy. Much difficulty had been met in adapting it to mechanical power, as the speaker has reason to suspect, because a client used to take him to ride in one of the first "marvels of the age" brought into the State of Vermont. The engine—steam—was under the seat, and apprehension was felt, when flashing along country roads at the terrifying rate of 20 miles an hour, lest the newfangled affair blow up. Frequent examinations were made to see that the fuse plug had not become congealed because of some undiscovered properties of high temperatures.

Manufacturers, however, almost immediately became aware of the absurdity of harboring difficulties of their own making, by clinging to precedent in the matter of vehicular form. They ceased attempts to adjust motors to inconvenient spaces in existing types of vehicles and began to build automobiles of shapes that would better accommodate them. They let form follow the essential functions of the new vehicle—a motor receptacle and a passenger conveyance. They produced new types of vehicles to meet changing conditions of life.

Early designs were not free from just criticism, and improvement in motors was accountable for a large part of the public's interest, but with standardization of mechanisms, persuasion rested more and more with appearance. Today, while mechanisms have well-nigh reached perfection, the artistic evolution of the automobile has been no less surprising. In large measure, it has become an æsthetic expression of a practical utility.

Are not the positions of the designer of automobiles and of buildings comparable? As of old, buildings are shelters for man's activities; but these are not the same as those which engaged races of people long gone. They had houses, temples and tombs, as we, but they did not have our schools, libraries, hospitals, banks, factories, nor our commercial buildings. As for houses, temples and tombs, probably only the last named were used in the way we use them.

How are creators of the two things viewing their respective problems? One might ask, "How has the architect regarded the problem of automobile design?" No doubt many of us remember how, a few years ago, an automobile manufacturer held a competition for the design of a car body, and sent programs to architects throughout the country. I imagine many an architect tried his skill at producing a design which would be an improvement over existing models. I imagine also that none who tackled the problem gave a moment's thought to historic types of vehicles. However beautiful he may have thought many examples of ancient vehicles to be, he would have felt that to attempt adaption of some old type of conveyance to requirements of the modern automobile would be an experiment disappointing to the manufacturer and without interest for the public. He would have realized that what was hoped for was a *new* thing, not an old thing made over to fit a new idea. That, I sometimes am driven to think, is what the public hopes of architecture—a fresh expression, not reiteration of an old one; and that, too, however willing it may be to grant a greater beauty to the old forms.

Had the designers of automobiles proceeded as most of us designers of buildings do, they would have done one of two things: either they would have cast about for models of vehicles of shapes and spaces to accommodate seats, steering gear and engine, or they would have chosen models for their intrinsic beauty and tried their ingenuity upon arranging the mechanism to fit a chosen model. The outcome of either process probably would have resembled results obtained by architects following such practices—an assortment of historic styles, each copied with such care that it would have been but a reminder of something else, not a fresh creation answering a new condition of life.

Let us assume that the automobile designer from 1895 on had thus pursued his object. Fresh from the triumph of his first creation—the horseless carriage—let us assume that he had turned his back upon the future and delved in the past. What might have been his viewpoint today? As an attempt to find an answer to the question, may I describe an imaginary visit to an automobile plant that *might have been?*

Truth Versus Custom

On exhibition were a number of vehicles of historic design. They were advertised as the last word in automobiles. Among them were vehicles which looked, for all the world, like old Roman and Etruscan wagons, Italian barouches, German state carriages, French landaus, English coaches, Irish jaunting cars—all sorts. A salesman

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was explaining the difficulties met with in adapting a splendid reproduction of a Greek chariot to the necessities of an automobile; how concealment of the motor, and provision for an invisible third wheel to take the weight borne by the tongue and horses in the original were strokes of genius. To objection of a possible customer that an arrangement which required one to stand while driving was uncomfortable, the salesman replied that although a seat would be a convenience, integrity of design proscribed its use—that a reputation for scholarly design was of too great value to be jeopardized by violated precedent.

Lacking knowledge of vehicular precedents, the customer assented perforce, but complained that a fellow would feel awkward driving the thing around, dressed in business or golf clothes—that "he'd have to wear a tunic!" With a semblance of patience, the salesman tried to reassure him by saying that surely there was no more reason for such a feeling than that a man who mounted the steps of the Sub-Treasury in Wall street should feel the necessity of donning a toga to escape a sense of conspicuous inconsistency. The customer turned listlessly to examine another model.

The incident reminds me of the answer of an architect of a large city library to suggestion by the Board of Trustees that a closed space over the main vestibule be provided with windows—that introduction of windows at that place would utterly ruin "his" design, a reproduction of the hexastyle porch of the Erectheum. Having only uncertain knowledge of historic architecture, the trustees, naturally, were stumped, but I can imagine that the whole race of architects were well damned in the thoughts, if not in the speech, of members of the Board of Trustees.

Elsewhere, a salesman was praising an adaptation of a coach of the Empire. He admitted that the step was inconveniently high, the springs too much in evidence, and the diameter of wheels needlessly great, but argued that "consistency of design" outweighed such objections. A bystander, noticing a pleasing bit of ornament on another car, intimated an inclination to buy if the device which had struck his fancy could be incorporated in the Empire design. With apparent condescension, the salesman explained that, while its form seemed not inharmonious, since the device did not appear until later, its use would be an anachronism seriously detrimental to the reputation of the designer—especially among his fellow designers —and that strict adherence to precedent in the small detail was the rock upon which that reputation had been built. He was quite sure that upon reflection the importance of such consistency would become apparent.

Evidently, the questioner was embarrassed. He blushed, and his eye wandered off around the room. Suddenly, it lighted up. "What's *that* vehicle?" he asked with interest. "Oh," answered the salesman, with a faintly patronizing accent, "that is a 'purely utilitarian' vehicle—just a car—no real design to it—just a practical affair." But the customer had become alive with interest. With some hesitation, he remarked: "Of course, I don't know anything about vehicular architecture, but, you know, I *like* that. It strikes me as a sensible contrivance, and I don't see why it isn't a good-looking car. You know—*that* is something I can understand." With feigned interest, the salesman smiled and questioned "Yes?"

I remembered I had heard similar remarks from sensible people about architecture, and I had a notion that the customer meant just about what they meant, when they had said that sort of thing about buildings—namely, that he knew nothing about historic vehicles; just as they meant that they knew nothing about historic buildings. He had notions of what constituted a good-looking car, as our clients have notions of what constitutes a good-looking building; and like the latter, he would have been alive to considerations of form and proportion, whereas he went dead over a matter of history.

The salesman left his customer to find what satisfactions the latter might in the conversation of a mechanic who had studied cars in the making. I was interested to observe his changed manner. He seemed free to express himself. He plied questions, and the mechanic explained what he called the "nice points of design"; the proportion of the height to length, the position of the wheels in relation to the body, the shape of the engine hood and driver's canopy; how, not only did they meet every practical consideration, but were shaped and joined in a way to make a "beautiful car." So he went on, and the man who didn't know anything about vehicular architecture seemed to understand him and to become more and more interested.

An Apostle of Precedent Explains

I was cogitating upon this, when the saleman, noticing me unattended, approached, and as if he sensed a sympathetic spirit, remarked, by way of introduction, that people didn't know anything about Art—that they knew only what they liked. "We've got to educate the public," he said. "That's the only way it will ever respond to a cultured taste. We are doing much in the way of education, but it is a slow process—there should be still more publicity. Articles on the history of Art and Vehicular Architecture by leading designers appear in the technical journals, but, unfortunately, they seldom reach those outside of the business. Some get into the popular magazines, and we are trying to get the newspapers to print articles on the subject—going into the origin of wheeled vehicles. I don't know when wheeled vehicles *did* first come into use, but archæologists have gone into the origin of their evolution from the days of prehistoric man, and their writings are a valuable contribution to popular education. They touch interestingly upon vehicles of Assyria and Egypt—though, as a matter of fact, we haven't been able to make much use of their designs. Somehow, Egyptian models don't seem to fit into our ideas of things. One clever chap *did* make a sensation with an adaptation of one of King Tut's funeral sleds, but it was only a 'stunt.'

"Of course, these writers 'stress' Grecian art—the classic period, when art reached the highest point in human history. An adaptation of a Grecian model is always good. The public generally knows that, even though it may not appreciate its fine qualities. It is really surpris-

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ing that designers experiment with other styles, when they know they cannot surpass what the Greeks did."

He paused for breath, or because he had summed up the situation. I was beginning to wonder if it were the public that needed the education, but noticing models, designs for which, obviously, were obtained elsewhere, I said: "I see that you don't confine yourselves strictly to Greek models?" "No—no," he replied, "our designers are gaining great facility in adaptation. They are finding 'inspiration' in vehicles of all old countries. Of late, a pretty free use is made of prototypes from anywhere—except the Orient. That's another case like Egypt; we don't seem to understand Orientals. Their old vehicles were beautiful, but their art was their own, and we don't seem to assimilate it as we do that of the Europeans."

The Mechanics of "Art"

Here my informant launched upon a new phase of the subject. "There was a time not long ago when designers were sharply divided upon the question of adaptability of historic styles to modern uses. Some argued that Romanesque vehicles were best adapted, while others, a little later, championed the Renaissance—chiefly the Italian. The latter finally convinced those who were supposed to know about vehicular architecture that that particular period surpassed all others in that respect. Since then there has been a strong trend toward Gothic motives—they surely did good work in those days! Just now opinion seems to be universal that as long as a designer is 'consistent'—doesn't mix his precedents—he can, if he is able, produce a really artistic design in any of the styles." After a pause, he added, "now and then, a man does something 'original,' but he doesn't get very far. Few are interested—many contemptuous—and well! it costs so much to produce an original design that few manufacturers can *afford* to have their men undertake such experiments.

"The cost of designing, today, in the crush of competition, is something to be considered. That is one reason, I suppose, why Greek and Roman work is so highly regarded—especially the Roman—by the manufacturers. You know—there was a celebrated Italian designer of the Renaissance—Lavigno, by name—who became so infatuated with vehicles of ancient Rome that he made measurements of all he could find. From these measurements he produced four or five average types and made drawings of them, and today they are published in cheap and convenient form. Manufacturers and designers couldn't get along without a copy of that work. Knowing the style—of the four or five—to be used, a job can be handed over to a subordinate, who refers to the proper drawings and obtains the exact proportions of all parts of the proposed model—relative thickness of wheel-spokes to diameter of hub, width to thickness of tire, size, shape and place of every decoration—each style had its own particular kind of ornament and a particular place for it to go, you see. It's a great book for manufacturers—and for designers, too—why, just come with me."

He led the way to a large room in which men were at work over drafting tables. "These men," he said, "have been specially educated as vehicle designers. They have had four or five years' training in vehicular design based upon historic precedent. Some have spent two or three years abroad studying originals. Their education—which is now thoroughly standardized upon the historic basis—*begins* with a thorough study of that very book, and it makes them of almost immediate service to a manufacturer."

On the tables were scattered about photographs of all kinds of vehicles. Men were to be seen scrutinizing them, copying bits of ornament, or some larger motive, or faithfully reproducing the entire design of a vehicle shown in the photograph. Noticing my interest, my guide said: "I want to show you our library." We entered a room furnished with tables, and surrounded by alcoves filled with books and portfolios. "We have hundreds of volumes and thousands of photographs of historic vehicles. It gives us quite an advantage over some of our competitors. Then we have quantities of illustrations of contemporary adaptations of old vehicles by designers in other establishments. These illustrations appear in our trade journals and are very useful—gives us an idea of what our competitors are doing and prevents them from getting very far ahead of us." "You mean," said I, "that you appropriate the designs of other factories?" "Oh, yes, they *all* do that. The publications illustrate the design of every new vehicle of importance that appears. Many illustrations appear in *all* the journals, so they accumulate rapidly. But the publishers are in business to make money and they have to run about the same stuff as their competitors. Manufacturers supply the photographs, because, naturally, they like to have their work as widely advertised as possible—it is good for their own business."

"I suppose 'original work,' as you call it, is also published?" I inquired. "Oh, yes, occasionally. But since manufacturers are not interested in the work of an original genius—can't afford to make us of it, in fact—the publisher regards its publication as a waste of valuable space in his journal." "It is all very interesting," is all I could find to say. "It is," finished my salesman-friend. "It is—but despite all this educational publicity, the public does not appreciate the art of vehicular design—it isn't interested. If we could only get the history of vehicular architecture introduced into the lower grades ——" But here my friend was called away and I found myself wandering aimlessly on the street, reflecting upon what I had seen and heard. I wondered if he had hit upon the remedy for the deplorable situation.

In closing this analogy, I want, if possible, to escape misunderstanding. I offer it as an instigator of reflection. I *know* that we cannot get fine wine from empty casks. I know that the best wine is the product of long fermentation therein, of the richest juices from the fruit of the vineyard, in which abides the essence of its flavor. As for architecture—its loveliest, most glorious examples, I believe, will be a product of a freed imagination guided by deep insight into the spirit which has imbued the great Art of the world, in whatever field, rather than of adherence to explicit forms; will, in more general terms, be a product of that culture which Matthew Arnold, as you may recall, defined as "a pursuit of our total perfection by means of getting to know, on all matters that

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most concern us, the best which has been thought and said in the world"; and through this knowledge, turning a stream of fresh and free thought upon our stock notions and habits, which we now follow staunchly but mechanically, vainly imagining that there is a virtue in following them staunchly which makes up for the mischief of following them mechanically.

W. R. B. WILLCOX.

ENVOI

I have no doubt that many of you are burning to take issue with some of the opinions you have heard this afternoon. But it would be hardly fair for me to invite impromptu replies or retorts to papers upon which so much thought and preparation have been lavished. These essays are to be published in the JOURNAL, however, and we invite you all to read them there and then write to the Editor the results of your thoughtful consideration of what has been advanced today on both sides of a question which, though dealt with here with a light hand, is nevertheless the most important in our professional life.

Pilots of the Ship of Beauty for this generation, I hope that what has been said here today will ring in our ears like the bells that toll over dangerous reefs every time we put pencil to paper, and that we may always feel that familiar act to be a re-consecration to new beauty, daily renewed by masters, not slaves to precedent or to sloth.

"What of the Dream, Beloved, what of the Dream?"

H. VAN BUREN MAGONIGLE.

The Fifty-Seventh Annual Convention

21-23 May, 1924
Washington, D. C.

The President's Address

In spite of a horizon not always unclouded, we have had a year of general architectural prosperity wherever industrial and commercial activities abound; but in those areas dependent on agriculture, the depression of a year ago continues, is rather intensified, in fact, with no apparent relief in sight although the malady is engaging the attention of many minds. And yet once again, in spite of a horizon still clouded here and there, the outlook for the present year is reassuring, judging from the volume of building permits, credit available for building operations and the volume of steel bookings recorded during the first three months of 1924. The dawn of a better spirit of good will in matters international, forecasting, let us hope, an early adjustment of many perplexing post-war difficulties, still further encourages an optimistic architectural outlook.

The present Board's activities have, I believe, measured up to the record of former administrations in steadily advancing the interests of the profession. The problems which today engage the attention of our Committees and members are proceeding by slow evolutionary changes toward solution or are constantly acquiring those new aspects that indicate healthy growth.

The practice of holding Executive Committee and Board meetings in widely scattered sections of Chapter activity continues to give satisfaction; wherefore Chapters desiring joint meetings may be encouraged to send invitations to the Institute's Secretary, with the understanding that no elaborate entertainment is expected; in fact Chapter courtesies should be confined to such informal luncheons and dinners as will involve only the slightest outlay.

Two successful Regional meetings have been held, one in Mr. Steele's, the Sixth District, and one in Mr. Favrot's, the Seventh; both have demonstrated the value of such conferences. They provide convenient opportunity for discussion between officials and members, now all too rare on account of the vast area embraced within the territory of the Institute. Distance and expense, in both time and money, prevent a very large percentage of our members from regularly attending Conventions; to those members these Regional meetings are full of promise, for in their regular recurrence something approximating Convention opportunity is afforded. It is the earnest hope of your President that each Director will, during the coming year, see to it that a Regional Conference is held in his district. Three such Conferences could be held in conjunction with as many meetings of Institute officials each year, thus ensuring direct and local contact with the Executive Committee or Board of Directors once every third year.

With no disparagement of any of the arduous duties of our Institute Committees, I would fain direct particular attention to two Committee reports.

The task assigned to the Public Works Committee, covering as it does such a wide range of possible usefulness to our profession and our art, demands our united encouragement. The Federal Government is at present deep in the problem of reorganizing the Federal Departments—a reorganization that will include the proposed Department of Public Works and establish architectural relations with the Government upon an entirely new basis.

You will recall the so-called Jones-Reavis bill, which, in 1919, proposed for architects a direct voice in Departmental Committees, and which was abandoned, giving place to the present plan as recommended in the Brown report wherein those charged with the interests of public architecture are to be left without direct contact with the heads of the Federal Departments, thereby greatly curtailing the influence of this division upon the future of our public architecture.

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The Public Works Committee has been alive to this danger and will present in its report an outline of the conditions found and various resolutions intended to better those conditions and to bring about a closer and more effective relationship between the Federal Government, our profession and the Institute that stands for it, and the art of architecture.

In view of the importance to architecture, to the Government, and to the membership of this Institute, of the matters with which the Committee on Public Works is charged, I bespeak for the Committee and its offerings your most earnest support. I would have you consider well the resolutions that will be proposed, and give them your hearty adherence.

I would also direct your attention to the report of the Committee on Community Planning as one of the most vital documents ever submitted to a Convention. It is unnecessary for me to dwell upon the problems with which our urban communities are faced as their growth accelerates at a rate never before known in history. Coincident with this growth increasing attention has been given to the principles of city planning, and to the study of these principles and their relation to architecture, your Committee has given long and patient attention.

In the conclusions presented in the Committee's report we discover that architecture, the art, is not the master but the servant of our method of city building, a method which has grown up all unconsciously and with the results of which we are now face to face. The problem is a momentous one and the search for its solution is a challenge to the art and practice of architecture. For, let us never forget, our individual achievements in plan and design can never produce the type of community in which human beings can live and work with pleasure and grow constantly toward a fuller and nobler life, unless the basic plan be a sound one. Let us therefore accept the challenge and with patience and diligence insist that architecture resume the leadership which is its very birthright.

The Committee on Education will present a survey of its activities. It is hoped that at its meeting on Wednesday evening there may be expressed freely and openly the varying thought of our whole membership on this subject. The report of this Committee should stress the way in which co-ordination is being brought about among our universities, colleges, ateliers, and architectural associations and clubs.

The almost universal adoption of the competitive system of judgment for student work and the uniform standards of criticism threaten to create, if they have not already done so, a standardized approach to the study of architecture and its problems, which, if blindly persisted in, may through the mere easy workableness of the system become a dangerous menace to the healthy development of individuality which, after all, is possibly the greatest claim we can make for architecture as one of mankind's most civilizing agents.

Last year the Convention heard a brief statement of the publishing activities of our Press. Its most recent achievement is now issued and I think that in the production of Louis Sullivan's "System of Ornament" we shall all agree that the Press has set a standard of typographical excellence wholly in keeping with those standards to which the Institute subscribes. It is my hope that this is but the beginning of an activity that will shed both glory and renown to the American Institute of Architects.

I wish to add my tribute to the general recognition which our membership accords to our several Committees—both standing and special—and to their chairmen who have guided the work during the past year—a work becoming ever more exacting as it becomes more important to the Institute, the profession, and to its great universal client—the public.

I would extend this personal tribute of a retiring President to those fellow officers whose generous and untiring help has made his administration not only what it has been in usefulness to the Institute but a broadening and pleasurable experience as well. A tribute that would be inadequate did it fail to reach our genial Executive Secretary and his most efficient staff.

To the retiring Treasurer, Mr. Waid, the Institute owes a debt of gratitude. His devotion to the interests of the Institute, his careful guidance of its finances, and his sound administrative ability have won for him the admiration and deep appreciation of the whole membership, I am sure.

The Questionnaire of the Committee on Architectural Relations has aroused widespread interest. In the response by more than twenty-five per cent of the entire membership—active, honorary, and retired—there has been made clear the great changes that have come to us as the inevitable result of the war—changes that are but in the early stages of what will be a remade world—with, I trust, a human race ready to listen as well as to talk.

The unexpected number and the general distribution of those who responded to the Questionnaire, together with the widespread desire to add to the inquiry begun, has provided a field for continued exploration—to the end that we may appreciate, among other things, the facts of our mammoth territorial dimension and the corresponding divergence of opinion—which go to show that locality must be an ever increasing factor in the solution of our relationship problems. It would seem wise to press this form of questioning until the voice of an actual majority has been recorded. From the analysis of such a record an authentic pronouncement on many of our most vital problems may then become possible.

An interesting development in this connection shows how variously the word profession is interpreted and how universally it is reverenced. A timely development as well, in that 1924 has seen the establishment of an International Professional Men's Club, devoted to the wider recognition and firmer establishment of the professional idea. In response to the expressed desire of our membership, a meeting has been called for the evening of Thursday to be devoted to the discussion of this subject and the report of the Committee having it in charge.

In the line of future activities for the Institute I am pleased to announce that arrangements have been made for a joint exhibition to be held in New York at the time of the Convention in 1925. The Russell Sage Foundation sponsoring the Commission having in charge the development of a Regional Plan for New York City joins the Institute in this program for holding an International Conference and Exhibition of Community Planning. The

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Architectural League of New York joins us in assembling an exhibition comprising Architecture and the Allied Arts covering the whole range of the building industry.

Institute members are strongly urged to see to it that their contributions to this great joint exhibition are worthy. We are reminded in this connection that our own exhibit held every third year, will be included in this effort, and our members may look forward to a Convention in 1925, exceptional in brilliancy—a Convention of national significance and value—a Convention at which we may kindle our enthusiasm, our love of design, of color, of line and form, leading us more clearly and wisely to interpret our own individuality and the art of our people and of today.

Since its reorganization in 1914 the American Institute of Architects has become a compact and vigorous professional society. Its form of government by Convention, Officers and Directors, operates in principle and in fact on a truly democratic basis. Its administrative, committee, and other activities, as prescribed by the Convention, or by the Board of Directors, are effectively conducted. The influence of the Institute with the Press, the Public, and the Governments of our cities, states, and country is most gratifying, when one considers the smallness of our number and the slenderness of our financial resources. Thus may we fairly conclude that we have developed our organization and administrative arms to a most satisfactory and commendable degree? And yet in looking backward over the past few years and over my own term as President, a question has arisen in my mind in quite a definite form, a question which I pass on to you. It is a question that I cannot answer, which perhaps you cannot answer, but it is one which we must answer sooner or later. I therefore leave with you this question:

Is the Institute furnishing to the architectural profession as a whole the highest form of leadership?

Let me confess at once that the nature of my question is spiritual, that I find myself deeply wondering as to whether in the perfection of our technical contributions, and in our unceasing effort to fulfill the material obligations laid upon us, we are not forgetting that architecture is an art of which the very essence is of the spirit of man. And if it seems a far cry, in these days, to things of the spirit, must we not remember that our whole architectural heritage is utterly spiritual in its significance? It is therefore with that in mind and with the thought before me of our great profession, both within and without the Institute, with the picture in my mind of the thousands of young men who are to follow in our footsteps and take up our tasks, that I ask my question.

I may not close without some words devoted to the loss we have suffered, a loss that will mark the present as one of the saddest years in the history of our Institute.

Providence in its wisdom has seen fit to bring to a close three brilliant architectural careers:

At New York on the 16th day of February, 1924, in the fifty-eighth year of his age, Henry Bacon died.

At Chicago on the 14th day of April, 1924, at the age of sixty-five, Louis H. Sullivan died.

At New York on the 24th day of April, 1924, when only fifty-five years of age, at the very zenith of his usefulness, Bertram Grosvenor Goodhue died.

Just before the closing of the first morning session the President read tributes in honor of Henry Bacon, Louis H. Sullivan and Bertram Grosvenor Goodhue. These were as follows:

Louis Henri Sullivan

Always a hero worshipper, the writer of these halting lines has ever preferred to pay his tribute to genius by a reverent silence. Such a reticence, if I may so call it, is too often due to a self-conscious fear of men whom we dimly recognize as bigger and wiser than we are. Too often also, our tongues make vocal our inferiority by fault finding and criticism that seem but the unconscious boastfulness of our lack of understanding. Then Death calls the Master and we begin to realize that there can be no requiem that will bring back to the world the unique spirit whose challenge fell upon dull and timid hearts.

Many and fine and true sayings are being uttered at the grave of Louis Sullivan, yet no one so far seems to have given expression to the tremendous power which he possessed. He was a tireless man, a human force that needed but the opportunity to do. No problem staggered him. No task was too great. One of his nicknames among his draftsmen was the Sun-god. He charged at each new job with the perfect zest that we usually associate with youthful inexperience. He was a philosopher, but his philosophy never usurped his power of action and accomplishment.

How he could draw! Miraculous things, never using an eraser, swiftly and surely, swooping strokes from the elbow. Where are they now? Fortunate it is that thanks to the Institute Press, the last drawings he made are available to us. They are precious shadows of the tremendously powerful things he produced in the days when he had to teach the A B C of his technique to his draftsmen, to the modelers of clay, the carvers of wood and the cutters of stone. "The Autobiography of an Idea," great human document though it is, only partly portrays the extraordinary dominant urge the man possessed. He seemed to have the fullness of power that exists in the mind of most men as a more or less dream-like illusion. And so, drawing ever unceasingly from his giant sources of power, Louis Sullivan aspired greatly, beyond the wildest contemporary dream of any student or teacher of the art he loved. To the last day he lived he called out to youth, and youth will some day hear his voice and understand his message, and lead sophisticated age to a mountain top where all may see that Louis Sullivan not only aspired but splendidly accomplished. He was not merely a path-finder. He not only broke a trail but he also built a road. Finally he gave up everything for the cause he loved. He never truckled. He sacrified client after client to the imperious bidding of what he thought was right. He was insufferably overbearing at times, but he could not help it. Faith in what he possessed and wanted to share with his clients was so perfectly assumed that it became a passion. Nothing else was allowed to interfere with that supreme faith.

And then at the last, with clients gone, friends gone, money gone, he did not recant. He retained his boyish

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optimism, mellowed and softened by the years. Bitterness visited him now and then but never took lasting hold. Shortly before he died he traveled to a school of architecture in response to the invitation of a man of vision and he talked to the boys. They clustered about him like bees around an old apple tree. They listened enchanted and they followed him to his train. I like to think of that quiet parting. There were no rah rah outbursts, but, moved by one of those inspirations which occasionally come to young men while their hearts are still tender, every one of them stood with lifted hat while the great Teacher was born swiftly from them. Let us, now standing silently, join those boys in their spirit of reverence.

WILLIAM L. STEELE.

BERTRAM GROSVENOR GOODHUE

To have been an architect is to have been a servant of mankind.

To have contributed ably to the world's architecture is to have been worthy.

To have been a distinguished designer is to have made a rare contribution to civilization.

To have been an architect and a distinguished designer and to have contributed notably to the great monuments of the world and to have done so at a time when art, appreciation, human sympathy, and even usual opportunity, have been at almost the lowest ebb in history, is to have found a place among the great of the human race.

To be born and to die is given to all mankind. Bertram Grosvenor Goodhue is dead! As this his cortege passes, we stand uncovered—bowed in the consciousness of an immeasurable irreparable loss!

THOMAS R. KIMBALL.

It was in the office of Renwick, the architect of the New York Cathedral, that Bertram Goodhue probably received the impulse which led him towards the study of Gothic Architecture, and which brought him into relation with Ralph Adams Cram, with whom he was in partnership for many years. The romanticism of mediæval work, ecclesiastical in the cathedral, military in the castles and walled towns, peculiarly fitted the firm for designing their numerous churches, and for the development of West Point.

In the sudden death of Bertram Goodhue the profession of architecture has experienced a very great loss, and to his many friends his absence will seem incredible and irreparable. For upon the one side he was possessed of an unusual genius, and upon the other of an equally unique and fascinating personality. Any testimony to his work at this time must be inadequate, as it is so varied in character and so much of the best of it remains to be accomplished, that the time is not ripe to compass it, or to give it its full meed of praise.

To have remarkable versatility combined with universal skill is rare. The merest summary of his efforts in all phases of artistic expression is amazing. He knew these phases to be closely related manifestations of beauty and busied himself with them all, and was equally at home with all and considered none too small to interest him.

An exquisite draughtsman and a distinguished designer, with fertile imagination and subtle perception, he enjoyed to the utmost every means of expression, and apart from his preëminent position as an architect was equally at home in all the minor arts, whether in the printer's craft, illumination and heraldry, bookplates, colophons, or stained glass, niello and textiles. He was a master of symbolism, and a keen limner of delicate form. "A fellow of infinite fancy," he was at first enamored of the intricacies of detail, and the involutions of pattern, and for this reason the freedom of mediæval expression was more sympathetic to him than were the more analytic considerations of the so-called classic styles. For there was something 'tricksey' in his nature.

He was fundamentally "Robin Goodfellow." His smile had in it a challenge to an exchange of quips and fancies and his work at times was mischievously appealing. It seemed as though he had familiar genii to do his bidding invisible to those with ordinary vision. He was the Ariel of architecture, unique, scintillating. But playing, as he did, arpeggios, he more and more searched for elemental themes. His very facility became antipathetic to him, and the restraint of reasoned simplicity was making his latest work more serene and tending towards what Guadet has called the true classic, that is, "the incontestible thing." The logic which he had at first gaily jilted had become to him a controlling goddess.

His latest conception had a nobility transcending detail, and the pendulum had swung so far with him that he expressed his idea of architecture as of justly proportioned solids devoid even of mouldings, speaking not with detail but with associated sculpture only. It was characteristic of him that he should run the entire gamut and grace any theory which he held. Compare the Chapel at West Point and the unexcelled buildings of the San Diego Exposition, entirely his own, and the detail of St. Thomas in New York, with the chapel of St. Bartholomew's, and the distinguished plan and ensemble of the Nebraska State Capitol.

At one moment playing with the fantastic "Order of the White Rose" and at another penetrating the deepest secrets of his great art, he was Protean. We will hardly meet his like again. He belonged to that rare group of men who have the gift of genius and has left an abiding influence behind him. He held his standard high, and as a genial, whimsical, earnest and fascinating companion, who had at times the trenchant touch of Heine, and at others the directness of Roland, we shall always miss him from our midst. His loss to the architectural profession is incalculable.

C. HOWARD WALKER.

HENRY BACON

Just a year ago, on the evening of 18 May, 1923, here upon the scene of his greatest achievement, Henry Bacon received the Gold Medal of the American Institute of Architects. Today we once more pay tribute to his genius. The award made to him was peculiarly in recognition of the building he designed in memory of Abraham Lincoln. The words which we now offer to his name and fame are in memory of the man himself, suddenly and untimely taken from us by death in New

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York, on 16 February, 1924. We would testify in this resolution to the passing of a memorable artist who expressed in his work the traits of a remarkably rich and steadfast nature. Tennyson wrote long ago the lines that in the most appropriate manner describe our friend—

"That tower of strength
Which stood four-square to all the winds that blow."

Henry Bacon was a tower of strength in our profession primarily because of his profound, unflinching sincerity, because of the fundamental honesty which ran through his character and his art. He was one of the spiritual descendants of the great American to whose glory he dedicated his labors upon the banks of the Potomac, which is to say that he was a man faithful to his duty, loving the truth, upright in action, and in all the relations of life showing a generous, helpful spirit to his fellows. It is not irrelevant for us to remember that if the maker of the Lincoln Memorial was an inspired artist he was also a true citizen, bound by inner ties to what is best and noblest in the manhood of the Republic.

He was born at Watseka, Illinois, on 28 November, 1866, the son of Henry and Elizabeth Kelton Bacon. He was graduated from the University of Illinois in 1888. He began his architectural career in the office of Chamberlain and Whidden, in Boston, and then for a short time was in that of McKim, Mead and White, in New York. To that association he returned after the two years in Europe that he enjoyed through winning the Rotch Travelling Scholarship and he remained there until he formed a partnership with James Brite in 1897. That partnership lasted until 1903, when he began to practise exclusively under his own name and launched upon the series of buildings and monuments which occupied him until his death.

His works were of the most diversified nature, embracing public and private structures all over the country, railway stations, bank buildings, churches, libraries, bridges, college buildings, an infinite variety of expressions in architecture of the needs and purposes of our national life. In any appreciation of the art of Henry Bacon emphasis should always be placed upon this matter of expression. We have never had a more conscientious exemplar of the genius of architecture. A façade with him was invariably the reflection of a plan. He was chary of the use of ornament. Attacking a given problem as necessarily a problem of construction, he withheld his hand from the application of any moulding, any decoration, which was not part and parcel of the structural unity at which, essentially, he aimed.

The fidelity of his art to the organic character of legitimate architecture was confirmed by the fineness and austerity of his taste. He had travelled much in Greece, he breathed the air of Athens and the Acropolis as though it were the air of his native land, and the experience thus gained so stimulated and enriched his instinctive refinement that he became a veritable master of the Greek tradition, not in any conventional, academic sense, but as an artist functioning spontaneously in classical terms. Collaborating often with the leading sculptors of his time, Augustus Saint-Gaudens, Daniel Chester French and others, he designed a large number of pedestals for statues. They are extraordinarily significant of the spare line, the justly proportioned mass, the dignified ensemble, which marked in his buildings his modern equivalent for antique beauty. Just as a Greek coin points in its largeness and grand simplicity to the more heroic splendors of Greek sculpture, so Henry Bacon's pedestals reveal in condensed form the secret of his architecture.

It is the secret of design brought under the sway of wise, time-tried and august law. In the Loncoln Memorial there was erected more than a masterpiece of style. It stands for the majesty of all that is right and fine in all the styles, for order and restraint, for the symmetry which is neither Greek nor Gothic but which is an eternal response to an inalienable craving in the mind of mankind, for purity, for elevation, for the aspiration of the human soul toward beauty. In this building Henry Bacon embodied an immortal standard, a work destined steadily to influence the taste of his countrymen. It is his salient monument, the crowning triumph of his life. But in all that he was, in all that he did, he left the impress of the same sterling character.

ROYAL CORTISSOZ.

Convention Action

Members of the Institute are again reminded that within a few weeks a complete copy of the Proceedings will be mailed from the Octagon. In the meantime a concise summary of the important actions taken at the Convention can best be given by reprinting the major part of the report of the Board of Directors together with the resolutions formally adopted by the Convention.

Report of the Board of Directors

REGIONAL CONFERENCES

The reports of the several regional conferences that have been held during the past year, and the experience of the officers of the Institute who were able to be present at one or more of them prove beyond question the desirability and real value of these informal gatherings. That they should be informal and in no sense additional organizations within the Institute is also definitely proven. The Board hopes that they will grow in popularity and that there will be many of them throughout the country during the coming year.

FINANCES AND OCTAGON PROPERTY

The Board calls attention to the fact that the Institute owns free and clear of encumbrance the exceptionally choice property which serves as headquarters in Washington. Through a series of years the finances of the Institute have been steadily growing stronger; and that despite the war and disturbed business conditions.

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The Endowment Fund has been built up for the maintenance of our property and at the same time a considerable amount of money has been spent in providing a new heating plant and in otherwise improving and protecting the Octagon House. For a number of years past the membership has been looking forward to the erection of a new building. This building should be an office and convention headquarters which will serve allied organizations as well as our own. The new building will supplement the Octagon House which the Board desires to see kept distinctly and solely for Institute use as soon as our tenants can be moved into the new office building. The restoration of the Octagon House then can be completed in such a way that it will be at once an interesting and notable old Colonial mansion and an office, museum, library and Directors' and Committee conference headquarters. Preliminary designs have been developed and in a general way were approved by a previous Convention. The Board believes that the time has come for pushing actively toward the realization of the plans of the Building Committee, and proposes to back the Committee which is ready to proceed to raise the necessary funds.

Membership

In April, 1920, the Institute started on a five-year program of development. At that time it had 1,442 Members. It was found that by the end of 1926 there would be 10,000 practicing architects in the United States. Surely, with the rapidly increasing registration laws, with the training given by our architectural schools, a larger and larger percentage of this number should be able to live up to the carefully maintained standards of the Institute. These are the men we want. It was therefore agreed that the Institute and its Chapters could not call themselves truly representative of the profession unless they had 40 per cent of this number or 4,000 within their ranks—as Institute members. This Program is fully explained in the Manual, copy of which is in the hands of every member. It calls for 4,000 Members at the end of 1926. Today we have 2,774 active members. Last year at the Convention a net gain of 230 was reported. This year the net gain is only 153.

In the three years we have grown from 1,442 Members to 2,774 Members. In the next two years and seven months we must gain 1,200 Members. At first the work of getting new members was conducted largely through the Secretary's Office. Some Chapters felt this to be an invasion of their rights. It is now the policy of the Board to leave to each Chapter the duty of securing its proportionate share of the increase, and the Secretary's Office can only furnish the ammunition. The will to bring in the worthy unaffiliated architects, and the initiative to approach them with application forms, must be exercised by those within each Chapter who are willing to serve the common good in this way. The Board urges upon each delegate that he take this message to his Chapter, that he discuss the situation at home, and that the Chapter determine whether or not it is doing all that it should in getting new members. The Program has been more than half completed from headquarters. It must be finished by you. The trust and duty is yours.

The total membership of the Institute on 17 May, 1924, was 2,867 (as against a total on 16 May, 1923, of 2,714) and it was made up as follows:

	1924	1923
Fellows	273	268
Members	2,500	2,353
Honorary Members	67	68
Honorary Corresponding Members	27	25

Since the last report of the Board there have been:	1924	1923
Elected Members	235	263
Reinstated	1	3
Members advanced to Fellowship	20	0
There have been the following resignations and removals:		
Fellows	1	1
Members	47	20
There have been the following deaths:		
Fellows	14	3
Members	22	10
Honorary Members	1	1
Honorary Corresponding Members	0	1
The total of new active members elected and reinstated have been	236	266
The total number of resignations, removals and deaths of active members have been	84	36
Leaving a net gain in active members of	152	230
Associates	366	
Juniors	107	

The following deaths, of which the Institute has record, occurred during the year:

Fellows

Henry Bacon
C. E. Carpenter
George H. Clemence
Leon Coquard
Bertram G. Goodhue
Wm. D. Hewitt
Henry W. Hill
William Holabird
Pierre L. LeBrun
T. C. Link
Frank L. Packard
John Beverley Robinson
Robert S. Roeschlaub
Joseph W. Yost

Members

Lewis Colt Albro
George D. Barnett
Hermann Barth
Val P. Collins
Ellicott R. Colson
Roger Milton Dickhut
James Driver
Leo Feinen
William Gordon
H. E. Hannaford
W. E. Higginbotham
O. D. Howard
Leif Jenssen
McMillan H. Johnson, Jr.
David Everett King
Terence A. Koen
Ewing H. Miller
John J. Petit
George C. Shattuck
Albert Toledano
P. J. Weber
Elliott Woods

Honorary Members

J. Shaw Walker

Regional Representation

At the last Convention a complete regional distribution of the Directors was accomplished. This was, however, done only by common consent and was not provided for in the By-laws. To make it definite the Board will present an amendment to the By-laws, notice of such an amendment having been duly promulgated. The resolution was adopted.

Education

The Committee on Education has continued its excellent and untiring work. Its report for the year's work will be embodied in the program of the meeting which it is to hold this evening. The Board recommends a full attendance of the delegates, members and guests.

In the Treasurer's Report, the creation of the Henry Adams' Fund is announced. From the interest on this fund there will be awarded annually cash prizes in the

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Archæology Course of the Beaux Arts Institute of Design on the problem in mediæval architecture, the amount not to exceed $200.00. This action has been taken by the Board on the recommendation of the Education Committee in the belief that in this way the Institute can best carry out Henry Adams' wish that the proceeds of the royalties on his book be applied to the stimulation of interest in early Christian Architecture.

It is a pleasure to announce that Mr. A. W. Sullivan, a brother and sole heir to the Estate of Louis H. Sullivan, has announced his intention of waiving all rights to the royalties on the late Louis H. Sullivan's books, *The Autobiography of an Idea* and *A System of Architectural Ornament,* in favor of the Education Fund of the American Institute of Architects.

The necessary legal papers will shortly be drawn up and this fund as it accrues will be available for educational work.

It would be appropriate for this convention to pass a resolution of thanks to Mr. A. W. Sullivan for his generosity.

Mr. Sullivan's book, *The Autobiography of an Idea,* has been spoken of by eminent reviewers as one of the great contributions to the literature of today. The plates in *A System of Architectural Ornament* are masterpieces in design and draughtsmanship and illustrate clearly the process of development of natural and geometrical forms into the intricate composition that characterized the author's decorative treatments.

The Institute may well be proud of receiving this valuable inheritance from so distinguished an Architect and Philosopher.

Small Houses

The Board has reviewed with interest the report of the Committee on Small Houses, which is a synopsis of the work of the Small House Service Bureau. The Board regrets that so few architects have taken a real interest in this valuable movement, and that the Architectural magazines as well have shown no interest. Once more the Board calls to your attention the fact that this project, while placed on a business basis, is limited in its possible return on capital invested, and must necessarily involve a burden of expense to finance the work of the various Bureaus during their initial stages. So much interest has been shown in the Bureau movement and so many interests outside the profession have shown their desire to become affiliated with it, to say nothing of being willing to finance it, that the Board saw fit to advise the Bureaus that it was not desirable to allow any building interests to have a financial interest in the Bureau movement, particularly in the matter of the sale of special stock. The Board knows that the Bureaus, just now, need additional capital. If the architects of the country would step in and each one take up the single share voting stock permitted to any one individual or firm the problem of the Bureau would be solved. The Board is convinced of the value of the movement as a definite step forward in the small-house architecture of the country, and hopes that in the future the opposition to the project will only come from without the profession and not from within.

Public Information

The Board is much interested in the report of the Committee and offers it to the Convention for discussion. The Board would like an expression of the sense of the meeting on the enlarged program of the Committee, to enable it to proceed most wisely in its conferences with the Committee, and therefore offers the resolution of the Committee for adoption by this Convention.

Resolved, That the Convention approves the work already accomplished by the Committee on Public Information, and endorses in principle its program for the further development of the work, as set forth in its report, such development to be undertaken under the direction of and after conference with the Board of Directors.

Universal Contract Forms

The Board reported a year ago on the development of the new Standard Contract Form, the result of the deliberations of the joint conference on Standard Construction Contracts, the Institute being one of the national organizations represented in the joint conference and the new form being based very largely on the present Institute Standard Documents.

During the past year the draft has been further slightly revised in phraseology and much improved in arrangement. The Board will present a resolution providing for full co-operation with the other national organizations interested in this movement and at the same time assuring full protection of the Institute's substantial interests in the present Standard Documents.

Public Works

The Board wishes to record its appreciation and approval of the untiring work of the Committee on Public Works. Without this it is difficult to say what would have been the condition at this time. The sane, logical and entirely fearless attitude of the Committee has the hearty approbation of the Board. The Board therefore presents to the Convention the three resolutions offered by the Committee:

Whereas, The building program of the United States is now many years behind in the volume of construction already authorized by Congress and the need for greatly increased accommodations has become imperative, and

Whereas, The volume of public building construction and the rental of space for Federal activities in the District of Columbia and throughout the country involves the appropriation of large sums from the public Treasury, and

Whereas, Accurate surveys of requirements and estimates of costs should be the basis of all appropriations, therefore

Be It Resolved, That the American Institute of Architects in Convention recommends to the Congress the creation of a new agency or the reorganization of the Supervising Architect's Office into an agency similar to the Public Buildings Commission, expanded to include within its surveys all building requirements, including questions of site, of the Federal Government throughout the country, and to furnish estimates of the amounts of appropriations necessary to meet these requirements.

Whereas, There has been developed an architecture in the United States equal in merit to the best contemporary work in the Old World, and

Whereas, This high standard is found in different sections of the country to be developed from local tradition and to reflect local physical and climatic conditions, and

Whereas, The American Architecture which has received distinguished recognition throughout the world includes many examples of the public architecture of the United States and of the several States, illustrated preeminently in the Lincoln Memorial, therefore

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Be It Resolved, That the American Institute of Architects in Convention expresses its conviction that all the public architecture of the United States should reflect the highest standards achieved in private and corporate work, and believes that this end may be attained, greater local interest aroused, considerable economies effected, and the pressure on the existing Government Bureau lessened or altogether relieved, by provision in appropriation bills or by general legislation for the employment of architects in private practice in the manner which has resulted in producing the Lincoln Memorial, the Freer Gallery, the Treasury Annex, the National Museum, and other notable buildings in the Federal City, and a number of the great State Capitols for the several States.

Resolved, That the American Institute of Architects cordially recommends to every chapter of the Institute that it create a Committee to co-operate in the work of such Congress group if already in operation in its home city or district or to consider the organization of a similar group, seeking for that purpose the help of existing engineers, builders, labor and material dealers' associations and all other elements interested in the building industry.

Whereas, The Plan of 1901 for the development of the park system of the District of Columbia and the location of future public buildings was prepared with the advice and co-operation of the American Institute of Architects, and

Whereas, The Plan of 1901 is essentially an enlargement of the historic Plan of 1792, prepared in order to meet the requirements occasioned during a century of growth of the Republic, and is a reassertion of the authority and value of that original plan, and

Whereas, The public works provided for by Congress and accomplished in accord with the plan during the past two decades (notably the removal of the railroads from the Mall, making possible the creation of a park connection between Capitol and White House and the creation of a plaza at the western front of the Capitol; the erection of a monumental Union Station and approaches; the restoration of the L'Enfant axis as the basis of an impressive central composition; and the creation of the Memorial to Abraham Lincoln, which has taken rank among the fine structures of the world) have amply justified the wisdom and dignity shown in the preparation of the Plan of 1901, and

Whereas, The works already accomplished are but a beginning of the orderly and systematic development of the National Capital, along lines of dignity, amenity and beauty, therefore

Be It Resolved, That the American Institute of Architects, in Convention, reaffirms its endorsement of the Plan of 1901, and urges the Congress to incorporate in any legislation authorizing construction of departmental or other buildings in the District of Columbia a provision that location and design of all such structures shall be in harmony with the Plan of 1901.

War Emergency Program

The Board approves in principle the idea of the study and formulation of a program for "Industrial Mobilization."

Resolved, That the American Institute of Architects indorses in principle the program of industrial mobilization laid down by the War Department, and offers its help and co-operation to the War Department in connection with any features of this program in which it can be of assistance.

Community Planning

The Board recommends the careful and earnest perusal of this Committee's report. A more general interest in the problems presented therein should be developed.

Preservation of Historic Monuments

The Board recommends the reading of the Committee's report as an inspiring account of the interest in the preservation of Historic Monuments. The Board presents to the Convention the resolutions offered by the Committee:

Resolved, That the American Institute of Architects considers the purchase and preservation of Monticello, the home of Thomas Jefferson, as the most important enterprise of this character now before the American public.

That it views with the greatest encouragement the efforts of the Thomas Jefferson Memorial Foundation to accomplish this end, and urges its own members to assist the Foundation in every way possible to accomplish its object; that it recognizes the necessity of the raising of a fund, over and above the purchase price, to restore the building and grounds reverently to their condition in Jefferson's own day, and of an endowment fund to preserve the property intact as a precious heritage for future generations.

Resolved, That the American Institute of Architects extends its encouragement and best wishes to the Dean and Chapter of Lincoln Cathedral in their attempt to repair the towers and other portions of the edifice, and their praiseworthy effort to accomplish this end without replacing the old stones or subjecting the surfaces to so-called "restoration."

The Oldroyd Lincoln Memorial Collection

The Board learns with gratification of legislation proposed in Congress for the Governmental purchase and preservation of the Oldroyd Lincoln Memorial Collection, of objects intimately connected with the life of the great President. It respectfully urges upon Congress the enactment of the measure so that this collection may be preserved for future generations.

Industrial Relations

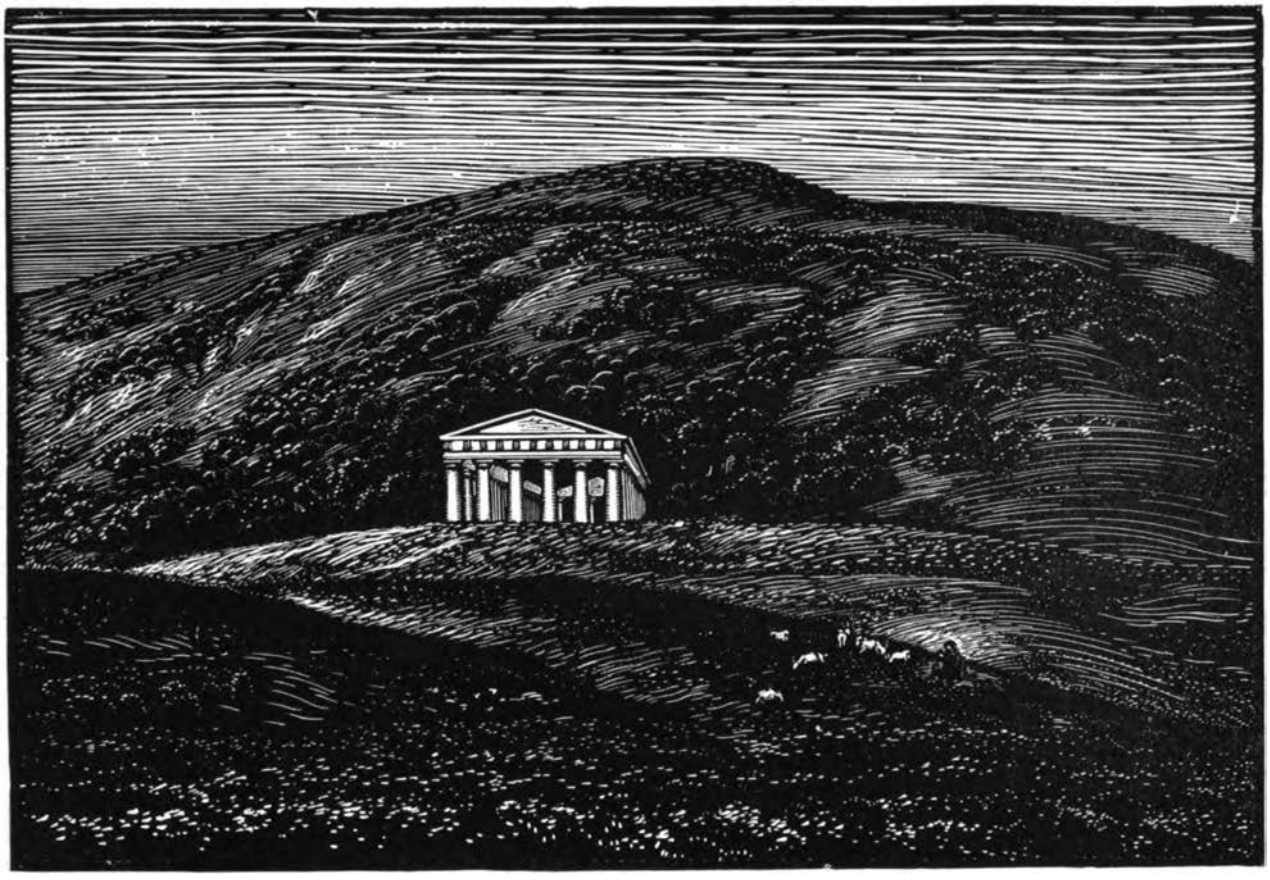
The Board wishes to record its pleasure over the results attained by this Committee during the past year. The position of co-operation with the Government, the American Construction Council, and others is most gratifying. The Board cannot emphasize too strongly the value and importance of the Building Congress movement. The architects should be the leaders in this movement, both in initiating new Congresses and in sustaining those now formed. The Board presents to the Convention the Committee's resolution:

Whereas, these "Congress" groups appear to have succeeded because their membership of contractors, material manufacturers and dealers, labor, sub-contractors, architects, engineers, etc., work jointly at their common industry problems, such as apprenticeship, seasonal employment, industry codes of ethics, unfair practices, shortage and over supply of labor, of materials, etc.

Registration Laws

The Board wishes to recognize, as does this Committee, the notable and valuable work being done by the National Council of Architectural Registration Boards. The Board recommends as a further step in the line of proper registration that wherever possible architects apply for examination to the N. C. A. R. B., and so help towards the

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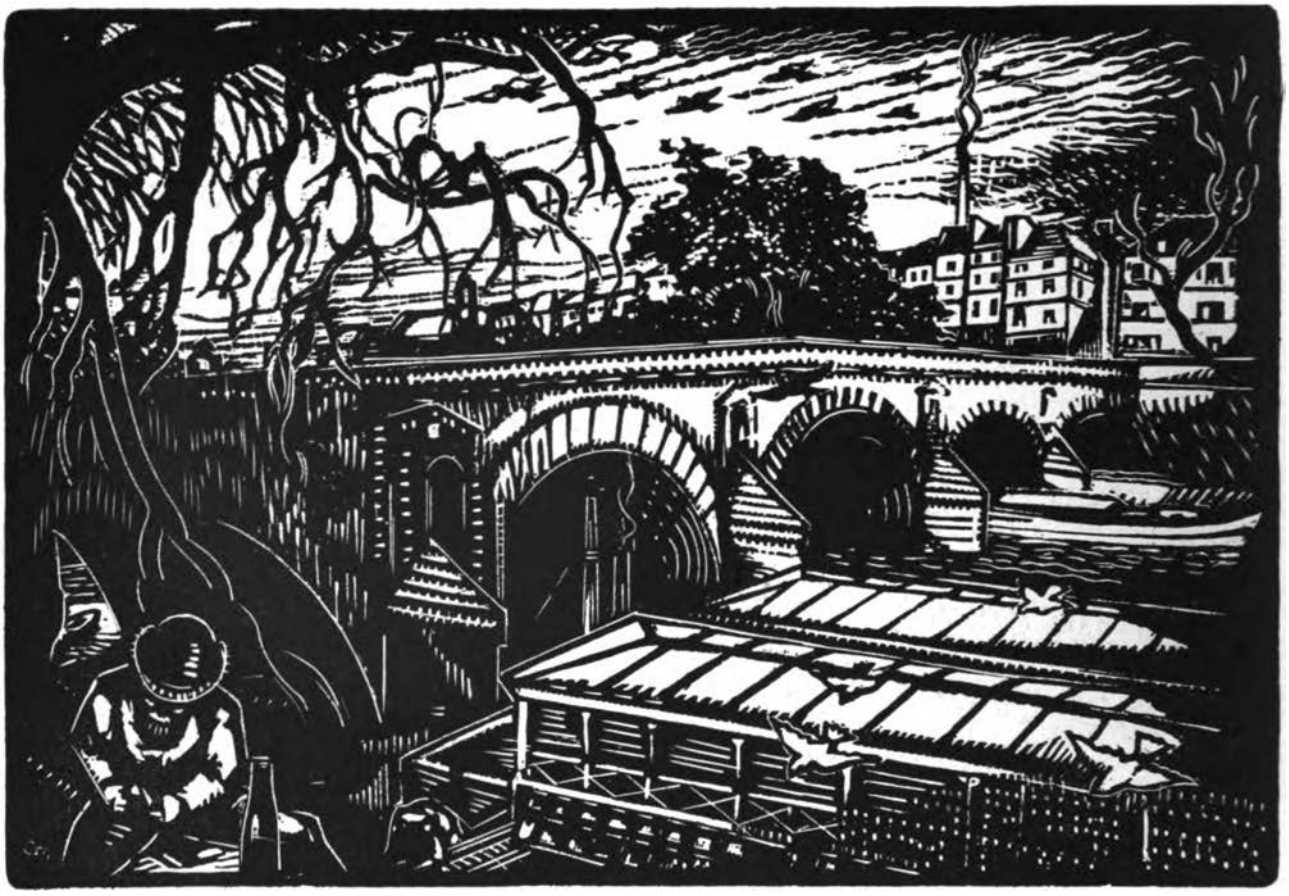


Eight Modern French Woodcuts

P. E. COLIN
GABRIELE BELOT
ROBICHON
DANIEL GIRARD
JEAN GIRARD

TEMPLE DE SEGESTE
P. E. Colin

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Le Pont Marie, Paris
Gabriele Belot

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Le Pont Neuf
Robichon

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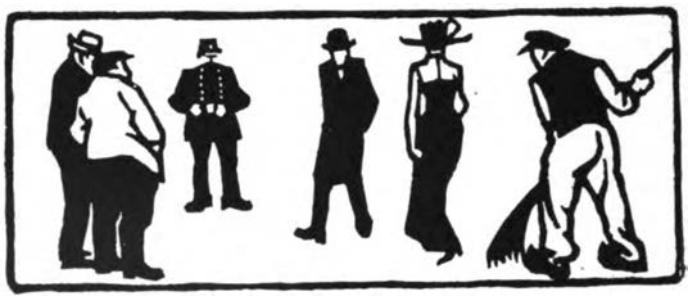
Bretagne
Daniel Girard

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NOTRE DAME—LE SOIR
Jean Girard

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CROQUIS PARISIENS



LA MANIFESTATION

THREE WOODCUTS
L. Moreau

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ultimate goal of reciprocal and satisfactory registration. The Board offers the following resolution:

Resolved, That the Board of Directors be authorized to make such contribution to the work of the National Council of Architectural Registration Boards as their investigation of its needs may prove to be necessary, and the funds for which may be available.

Co-operation with the Department of Commerce

The Institute has continued and expanded its co-operation with the Department of Commerce during the last year. It has two representatives on the Committee on Building Codes which is carrying on its work steadily and as rapidly as such work can be carried on. Many of the Chapters and individual members of the Institute have rendered valuable advisory service to this Committee. It also has representatives on many other Committees, such as Lumber Standards, which have accomplished notable results during the past year. It is also represented on the Advisory Council and the Board of Directors of the "Better Homes in America Corporation" of which Mr. Hoover is the President, and which is doing noteworthy work along the lines of small homes throughout the country. Here again many of the Chapters have given active co-operation.

Scientific Research Department and Structural Service Committee

The newly-created Scientific Research Department with Mr. Ben J. Lubschez, Director, and Leroy C. Kern, Technical Secretary, is functioning smoothly and gives promise of becoming a most important Institute activity.

This Department serves the Producers' Research Council—affiliated with the American Institute of Architects—in an advisory capacity and exerts a splendid influence in bringing about a better understanding between architects and the producers of building materials.

It is improving the character and dependability of advertising and is extending the use of the A. I. A. Classification for filing and systematizing methods of presentation and size of advertising matter.

The Scientific Research Department prepares the material for the Structural Service Department of the JOURNAL and acts as the central office and does the secretarial and administrative work for the Structural Service Committee.

It represents the Institute on Committees of the American Society for Testing Materials; American Engineering Standards Committee and Committees of the Division of Simplified Practice.

It co-operates with the Federal Specification Board, National Fire Protection Assn., Underwriters' Laboratories, Research Laboratories of the American Society of Heating and Ventilating Engineers, The Bureau of Standards and many other university and special research laboratories.

This Department digests and collates technical and scientific data relating to building materials and appliances and is prepared to answer directly inquiries from architects from its own files or refer them to other reliable sources of information.

Resolved, That the Board appoint a Committee of three Architects, located in New York, to act as an Advisory Council to the Scientific Research Department.

Resolved, That the Board request each of the larger Chapters to appoint a Standing Committee on Scientific Research to advise with producers in its locality and prepare data for reference to the Central Department in New York City.

Convention of 1925

The Board announces with anticipation that the Convention for 1925 will be held in New York. The details, so far as they have been worked out, are given in the Committee's report.

Fellowships

The Board regrets that the question of the procedure in the election of Fellows is still before the Institute. The Board presents the following amendment to the By-laws, notice of this amendment having been duly promulgated:

Fellows: Article II, Section 1. Strike out the third paragraph and insert the following:

"The name of each candidate selected by the Jury shall, before nomination, be submitted to the members of the Chapter of which he is a member and then to all Members and Fellows of the Institute. The Jury shall then nominate to the Board of Directors for election such candidates as it considers entitled to recognition, stating in each case the reasons for its choice.

"The Jury shall formulate rules for its procedure, subject to the approval of the Board of Directors."

Amend Section 2—Mode of Election, to read as follows:

"Fellows may be elected only at the regular meeting preceding a Convention.

"Such election shall be by ballot; at least ten members of the Board to be present and voting. No nominee shall be declared elected against whom two or more negative votes have been cast.

"The names of all nominees so elected shall be read to the Convention and declared to be Fellows of the American Institute of Architects.

"No nominee who fails of election shall be eligible for renomination for at least two years."

Section 3. Nomenclature. Remains unchanged.

The above resolutions were adopted.

Associateship, Extension of Period

The Board believes that it is desirable to extend the probationary term for Associates from three years to five years, and offers an amendment to the By-laws, notice of this amendment having been duly promulgated.

(The amendment was adopted. Associates are now required to apply for admission to the Institute within five years of their election to the Institute instead of within three years as formerly.)

Dues

The Board offers a resolution changing the By-laws in regard to the annual dues. By examination of the Treasurer's Report you can see that there is each year a large amount of unpaid dues. It is hoped that the possibility of avoiding having your dues raised by a prompt payment will help out the Treasurer, and that the extra tax for delay will help pay the cost to the Institute of delay. This amendment also makes it possible to pay the dues in semi-annual installments.

"Resolved, The annual dues of each Member and Fellow shall be Twenty Dollars, of which $2.50 shall be for one year's subscription to the JOURNAL, provided they are paid in full in advance on or before January 31st. Otherwise the annual dues of each Member and Fellow shall be Twenty-Five Dollars, payable semi-annually in ad-

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vance on or before January 31st and July 31st respectively."

Two-Year Term for President

The Board offers, as requested by the Sixth Regional Conference, but does not approve, an amendment to the By-laws providing for a two-year term for the President of the Institute and no re-election. The amendment was not adopted.

Competitions

This is a subject that is always before us. The Board hopes that the Committee's report has been carefully studied. Evidence goes to enforce the Board in its opinion that the fundamentals of the Competition Code must not be changed. There is reason for belief that it might be rewritten in a way that would be more understandable by the community at large. The Board urges the closer co-operation of the Committees of Education and Public Information with the Committee on Competitions. The Board also feels that something should be done along the line of a "Uniform Law Governing Competitions to Select Architects for Public Projects," as proposed by the previous Committee on Competitions. The matter of competition is a matter of slow and steady education, not only of the community at large, the various governmental boards of the country, but particularly of the profession itself. Until the profession itself is clear on the matter of competitions it is useless and unreasonable to expect that others not so vitally interested can possibly understand them.

Architectural Relations

The Board desires to know what the Convention thinks about the subject of the report of the Committee on Architectural Relations. Hence it has devoted the second evening session of the Convention to this and to the subject of Competitions. There could be no better time than the present to discuss architectural relations and what they involve, and no better time to try and settle the matter of competitions, either by leaving it to each Chapter or trying to do it for the country as a whole. The Board expects, therefore, the presence of every delegate and others interested on Thursday evening, promptly at 8:30 P. M.

And now, may the Board take the liberty of doing a little moralizing? For a long time no one has dared to raise his voice and suggest that there may be an atom of fault within the Institute or the profession itself. We must educate the public, the schools, the legislatures, what you will, but never, no never, ourselves. It is true that our membership is but a part of the entire profession, less than half in actual numbers, but a very great part when the amount of work done is taken into consideration. Hence our example should be a great one, and what we do should set the example for the balance of the profession. Let us look at ourselves for a minute. This seems to us a most propitious time for so doing. Is the Institute really accomplishing what it desires? Is it following that course which will make it the most honored profession of all the professions, or is it, on the contrary, so losing itself in material things that it is on the downward path, and soon will lose even that honor and appreciation which it now has?

Is it perhaps true that too many of our profession are prostituting themselves and the service they should render through the desire or necessity of obtaining work at any cost? Is it true that a great majority of the profession do not themselves understand the proper function and service of the architect? Should we not attempt to answer such questions as these, and if we find the answer adverse try to remedy the faults?

And the Board wishes to call to the mind of every architect, both within and without the Institute, the great need for public service from the trained professional man, and to call on our profession to take its proper place in the public mind.

By your deeds shall ye be known.

Convention Notes

The Octagon Property

THE report of the Building Committee was warmly debated and it is evident that a great sentiment still exists in opposition to any plan which seems destined in any way to impair the value of the architectural whole. The question of pulling down the stables has long been a point of controversy and against the plan for utilizing their site for a new building development there will be stout opposition, as was evidenced by the debate referred to above. Frequent comment was heard as to the apparent inconsistency of the Institute which maintains a Committee on the Preservation of Historic Monuments for looking after other people's affairs while remaining unmindful of its own. On the other hand, there is the more practical view which looks at the growing Institute and believes that the needs of the future outweigh any considerations of sentiment. It seems likely that this question will be one of the foremost during the coming administrations.

Finances

The report of the Treasurer showed that the Institute was in a sound and healthy financial condition, but the Treasurer was careful to point out that in 1922 the membership increase was 10% and expenditure increase 20%. In 1923, membership increased 9% and expenditure by 14%. The Treasurer indicated that these discrepancies must be accepted as a warning. The Institute has not raised its dues for more than a decade, during which time everything else in life has been substantially marked up. The members of the Institute cannot much longer defer the problem presented.

Other Reports

Considerations of the Reports of the Committees on Education, Competitions, Community Planning and Architectural Relations, all of which were debated at length during the Convention sessions, will have to be deferred until our next issue.

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CONVENTION NOTES

Because the Fifty-seventh Annual Convention was held so late in May, it was impossible to publish in the JOURNAL for June the customary narrative account of the progress of the Convention, which will instead appear in the July number.

New Business

A number of resolutions were introduced in the course of the Convention. A few of these measures appear, in substance, below:

"*Whereas,* The Committee on Architectural Relations has become convinced that the investigation begun in response to the Board's instructions promises results of the greatest importance to the profession and to the Institute and to the public, be it therefore

"*Resolved,* That the work begun by the Committee be continued and means adequate for the vigorous prosecution of the inquiry now in progress be provided."

Whereas, The American Institute of Architects has always maintained a leading interest in the development of Washington and has now reaffirmed this interest by a resolution favoring a commission to develop the plan of Washington as a whole, and

Whereas, the Washington situation lies wholly with the Congress whose members respect the interest and desires of their constituents, therefore,

Be it Resolved, That the American Institute of Architects shall be a general committee on Washington with a member in each Chapter to keep membership informed upon the needs or dangers of the Washington plan, to obtain the formation of the National Capitol Planning Commission as approved by the Convention, and as occasion requires, to focus the sentiment of their respective sections upon their representatives in Congress.

Whereas, there is before Congress a bill placing a tax on art importations, and,

Whereas, these importations and art objects to a large extent eventually find their place in the museums, and

Whereas, we believe that art objects are really educational and not matters of luxury, therefore,

Be it Resolved, that the American Institute of Architects, in Convention assembled, appeal to Congress for a repeal and for the removal of the tax on these objects.

"*Whereas,* in the Fifty-third Annual Convention the following resolution was passed, that it is the sense of the Convention that the purposes for which the Institute exists would be better served were the procedure of the Convention radically changed so that less time would be devoted to the heavy routine of business and a far greater proportion of time be devoted to a consideration of subjects on architecture and its kindred arts, now therefore,

"*Be it Resolved,* in this Fifty-seventh Convention, that the suggestions made in the resolution passed by the Fifty-third Annual Convention have been most admirably consummated in the present Convention and, further,

"*Be it Resolved,* that the thanks of this Convention are hereby tendered to all the Officers of the Institute who have been directly or indirectly responsible for the successful results named."

A few further resolutions were introduced on the floor of the Convention and passed. The details of these resolutions will appear in the Proceedings, as time and space will not permit their publication in this issue of the JOURNAL.

Elections

Officers

PRESIDENT

D. Everett Waid, *New York City.*

SECRETARY

Edwin H. Brown, *Minneapolis.*

TREASURER

William B. Ittner, *St. Louis.*

DIRECTORS

Nat Gaillard Walker, *Rock Hill, S. C.* Fourth District.
William J. Sayward, *Atlanta.* Seventh District.
Sylvain Schnaittacher, *San Francisco.* Ninth District.

Honorary Members Elected

Edward Bok, *Philadelphia.* Man of letters, devoting his time and fortune to the advancement of culture, a true American in spirit.

Charles Custis Harrison, LL.D., *Philadelphia,* Patron of the Arts, instrumental in the promotion of good Architecture, the welfare of architectural training, archæology, and the proper housing of collections.

Honorary Corresponding Members Elected

Charles Herbert Reilly, *Liverpool, England.* Professor and Director of the School of Architecture, University of Liverpool, able Architect, sympathetic and distinguished Instructor in Architecture, student and writer.

John Alfred Gotch, F.S.A., *London, England.* President of the Royal Institute of British Architects.

The Four New Chapters

CHARTERS were granted to the four new Chapters of the Institute formed during the year past. Three of these—the NORTH TEXAS, the SOUTH TEXAS and the WEST TEXAS CHAPTERS—are the result of the partition of the old TEXAS CHAPTER, which has accordingly passed out of existence. The fourth body to receive its charter was the GRAND RAPIDS CHAPTER.

The Banquet to the Retiring President

IN place of the usual formal banquet an informal dinner was tendered to the retiring president, Mr. Faville. A host of delegates, members and guests assembled to express their appreciation of his labors on behalf of the Institute. Those who were fortunate enough to attend the two Conventions at Washington during his administration will remember them as those in which the Institute lifted these annual gatherings to the highest point of both pleasure and profit to which they have so far attained. The Convention of 1923 was marked by the unforgettable

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beauty of the pageant and by sessions from which much of the old tedium and monotony had been banished. This year, the opinion seemed to be unanimous that never within the memory of any of those present had the Convention arranged sessions of such extraordinary interest. The convention room was filled at all times and the pleasure of a smooth-running and skillfully conducted program was heightened by interesting and even brilliant debate. The Thursday afternoon session conducted by Mr. Magonigle was one of the pinnacles of Convention achievement.

At the informal dinner to Mr. Faville, Mr. Magonigle and Mr. Pond were the toastmasters and under their happy and delightful guidance we said *au revoir* to William Bliss Faville, great president of a great Institute, and bade him Godspeed on his journey toward a well-earned rest.

London Letter

IT HAS already been forecast in these letters that this year was to witness a widespread interest in the modern work of Sweden, where there exists a group of architects who are doing extremely distinguished work. The desire for closer study of their buildings has prompted the Architectural Association to arrange for an exhibition of Swedish drawings at the new R.I.B.A. galleries, to be officially opened by the Swedish Minister, and in which will be shown examples of the work of Ragnar Östberg, the architect of the new Stockholm Townhall, and other leading Swedish architects. It is typical of the enthusiasm with which the art of architecture is officially fostered in Sweden that the Municipality of Stockholm has had made, on purpose for the exhibition, a scale model of the Stockholm Stadshus. There is much in the modern Swedish work which appeals to the English mind—the respect for tradition, a genuine feeling for materials, and a certain whimsical fancy in the handling of detail. While such planning as that of the Stadshus, derived much more from mediæval than from Roman tradition, will revive the latest love of Gothic, unfashionable at present, but certain to live again in spirit if not in the flesh of the Revival period.

* * *

Unfortunately for the Gothicists, few of their protagonists are gifted with a sense of humor, and are apt to surround such honored names as those of Pugin, Street, Bodley and Burgess with a halo of sanctified fervor which is a little trying. Not all believers in Gothic are, however, so hampered, and anyone who wishes to see the subject of English Gothic Architecture of the 19th century treated in a sincere and yet entertaining way may read with advantage the paper on this subject by Mr. H. S. Goodhart-Rendel, published in the 5 April number of the *Journal of the R.I.B.A.*

Mr. Rendel is a humanist, and sees in Gothic precisely those qualities which are really vital to the style, but he is not sanctimonious. He can also deal crisply with facts, as witness his piquant summary of the prodigious career of Pugin: "at the age of fifteen Pugin designed the furniture for the new rooms at Windsor Castle; at 22 he changed his religion; at 24 he published what is probably the most amusing architectural book which has ever been written; at 32 (when again he became a widower), he was the best known church architect in Europe; at 37 he married a third time; at 39 he went mad, and at 40 he died." This was, however, too much for one member of Mr. Rendel's audience, who stalked majestically out with every appearance of offended sensibilities. There is certainly danger in taking oneself too seriously in devotion to architecture and architects.

* * *

It is well, however, that the great general public should indulge a little in this harmless weakness, and that it should be encouraged thereto by such displays as that just terminated at Grosvenor House under the auspices of the Architecture Club. This Club, it may be remembered, is composed in equal proportions of architects and literary men, and this exhibition is the second one held since its formation. Grosvenor House is of course a remarkable setting for such a function as was the opening by Lord Curzon of Kedleston. The great rooms are dignified and finely proportioned, and even the socialist must regret the enormous tax burdens which oblige the Duke of Westminster to leave this grand house in the heart of Mayfair untenanted. The Exhibition itself was less crowded and perhaps a trifle less interesting than that of last year in respect of the work displayed, not a surprising fact in view of the accumulation of pre-war work at the previous show as opposed to the post-war buildings shown this time.

Design generally shows the tendency towards simplification and what Professor Reilly calls the "stark." There is marked evidence of better training, however, and less "Tudorbethan" and imitation of old work generally. Some of the best things in the show were small houses, notably some Irish cottages by Williams Ellis and work at Swanpool Housing Scheme by Thomson, Hennell & James; there were also good churches by Gilbert Scott, Evelyn Simmons, and Robert Atkinson, and some interesting architectural models.

An excellent feature of the exhibition is the series of public lantern lectures given every afternoon by various architects. They deal with such subjects as "Modern Architecture," "Housing," "Town Planning" and "Everyday Architecture." The public not only attended but was interested, and the exhibition generally has helped to advance the cause in spite of the tendency of an untimely 'bus strike to reduce the attendance.

* * *

Another function, biennial this time, which has just concluded, is the Building Trades Exhibition at Olympia. It was, as usual, a very good show, with a display of every kind of material and appliance, but an examination of the stands shows that no one has yet evolved the real

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substitute for brick in housebuilding. The exhibition was opened by Mr. Wheatley, the Labor Minister of Health, with a discourse in which he outlined the new programme of the Government for Housing, and dealt with some of the attendant difficulties. The problem as stated by Mr. Wheatley is the building of a minimum of 100,000 houses per annum, increasing each year progressively until in 15 years' time the total of new constructions reaches 2,500,000. Baldly stated, the idea is to build houses which will be rented and not sold. "The basis of cost is to be agreed," and this is the crux. It means, if the scheme is to be sanctioned, that the building costs must be kept down to somewhere near the present level, and in any case it is certain that the houses will be "uneconomic," and that the loss on them will be borne in the ratio of two-thirds by the State and one-third by the Local Authority. In fifteen years' time when the full programme is realized, it will mean that local rates have to bear about 10d. in the £1 for Housing.

Labor is to co-operate by relaxing the restrictions on apprentices, who are to be accepted up to the age of 20 years and who need serve only three or four years instead of the usual six. But an essential part of the success of any such scheme lies in the guarantee that there shall be no restrictions on ordinary commercial and private work.

* * *

In the meantime, the architectural profession makes good progress towards Unification. The Society of Architects and the R.I.B.A. Councils have now published their agreement on the terms of amalgamation, and it only remains for the general body of the members in each to ratify the proposals. The method of testing the opinion of the Institute members is for the present council to seek re-election on the platform of Unification with Registration to follow, and if as it is hoped, the Council is returned, the Society of Architects will probably be able to "swing" its members towards acceptance. The latter body will then cease to exist, and there will be instead an enormously strengthened central Institute, with all its members "chartered architects."

* * *

The recently formed Commission of Fine Arts has chosen for itself a secretary, Mr. Chalton Bradshow, who bears the distinction of being the first British Rome Scholar. The Committee will not act unless its advice is sought and officially requested, an excellent proviso guaranteeing against the abuses of interference. One of its first tasks has been to deal with the problem of Rennie's masterpiece, Waterloo Bridge, which has been showing alarming signs of settlement[1] in midstream, due to erosion or scouring. The scheme finally determined upon by the London County Council, in spite of many influential protests to the contrary, is to rebuild and widen the present bridge, an undertaking for which it will be necessary to find about £1,000,000.

* * *

At the time of writing the British Empire Exhibition at Wembley is being officially opened by the King. Strikes and bad weather have combined to delay the progress of the work, and it will be another three weeks before everything is finished and in order.

The exhibition represents a gigantic effort worthy of the Empire's trade and industry and should provide an immense incentive to both. From the æsthetic standpoint, whole hearted enthusiasm would be the wish rather than the thought. There are great spaces and big buildings, and highly successful individual efforts in design and color. But great opportunities have been missed; the layout lacks a great central vista, the approaches are insignificant, and the design of the main building suggests the fortress rather than the grave and tempered gaiety of a great nation.

For such a scheme was required a master mind—or several. Conscientious effort has done wonders; but what can one feel of a British Empire Exhibition in which men like Burnet, Lutyens, Baker and Gilbert Scott have not been called upon to design so much as a single stall?

London. "X."

[1] Since this letter was written, dispatches have announced the closing to traffic of this famous bridge.—Ed.

A Restoration Activity

A few months before his death in 1917, Professor H. Langford Warren, Dean of the Faculty of Architecture at Harvard, was energetically engaged in a purpose to rebuild one of the devastated French churches. This was to have been a fine act of international amenity on the part of American architects towards their brethren in France.

A committee was formed with Ralph Adams Cram as Chairman, and H. Langford Warren as Secretary, to solicit funds among the architects of America. Only $800 had been secured when Dean Warren died.

Measures were taken to issue a brochure, illustrating vividly the destruction which had been suffered by the churches in the war region. After the Armistice, however, the unresponsiveness of the public led the Committee to feel that it would be useless to pursue this quest.

The Executive Committee, with Mr. Cram still as Chairman, and Mr. Charles D. Maginnis as Secretary, subsequently decided that it would purchase with the money already contributed a bronze bell for one of the restored churches.

Through Mr. Henry Copley Greene, officially connected with the Noyon section, it was possible to carry this idea into effect, and the Cathedral at Noyon, the bells of which had been melted down by the Germans, was presented with a new bell.

Jefferson M. Hamilton announces the removal of his offices from Minneapolis, Minn., to the Columbia Tower Bldg., Memphis, Tenn.

Heacock & Hokanson have moved their offices to Suite 905, 1211 Chestnut street, Philadelphia, Pa.

The American Federation of Arts is preparing a "Who's Who in Architecture" as a feature of the forthcoming volume of the American Art Annual. Architects are requested to send suitable data immediately to the Federation at 1741 New York Ave., Washington, D. C.

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The Secretary's Page

33. The Fifty-seventh Convention is yet to come as this is written, and, such is the habit of monthly magazines, it will have become a thing of the past when this is printed. Hence I shall say nothing about the Convention here, except to venture the thought that this year we are going to have a 100 per cent Convention so far as Chapter representation is concerned.

34. Chapter Bulletins: Two Chapters and a State Society regularly send their Bulletins to the Octagon—60 copies each—and from the Octagon they are regularly distributed to all Chapter Secretaries. These are from the BOSTON and CHICAGO CHAPTERS and the Illinois Society. Any Chapter issuing bulletins directly or through its committees can reach all the Chapters of the Institute in the easiest possible way if it will send 60 copies to the Secretary's Office. (At Washington, please. See Item 3 of the Secretary's Page, October, 1923.) No directions will be necessary. All any Chapter has to do is to send the Bulletins and the Secretary's Office will do the rest.

35. The Secretary has received minutes or bulletins from 13 Chapters during his last breathing spell: BOSTON, CHICAGO, WASHINGTON STATE, WASHINGTON, D. C., ALABAMA, MINNESOTA, KANSAS CITY, NEW YORK, BALTIMORE, PITTSBURGH, COLUMBUS, UTAH, NEBRASKA.

BOSTON, CHICAGO and WASHINGTON State have printed bulletins in addition to the formal minutes. UTAH'S *Irregular Curves* is with us again, NEBRASKA with its premiated cover design, and ALABAMA with an attractive blueprinted cover. The balance are the formal copies of minutes with no attempts at embellishments. It is pleasant to see the growing interest in the Chapters toward the goal of attractive renderings of their documents.

ALABAMA comes forth with its new Bulletin, recording its First Quarterly Meeting for 1924. The Secretary is much interested in the idea of the news items from the various cities of the state, from the special correspondents. This is worth developing.

MINNESOTA reports a variation on its regular meetings by having two combined meetings with the Engineers' Club of Minneapolis, one under the auspices of the engineers and the other under the architects.

BALTIMORE records troubles in the building trades, and like previous cases elsewhere, the plea of the interested parties to enlist the Chapter definitely on their side of the question. As the architectural profession has always done in the past, the Baltimore Chapter decided to continue to preserve its impartiality in the question. Surely this is the only position the profession can ever take.

COLUMBUS sends its minutes for the year 1924. The Secretary is unable to go through them all, but the letter of transmittal evidently hits the high spots.

EDWIN H. BROWN, *Secretary.*

Allied Arts

The opening of the new American Wing of the Metropolitan Museum of Art, made possible by the wise generosity of Robert W. and Emily Johnston de Forest, is an event of supreme importance to the architects of the country. We have been through a period in which the influence of historic style has been generally regarded as showing itself through the grammatical use of motives and ornaments. It should be regarded rather as a source of inspiration, illuminating as to the characteristics and traditions of given places and periods but not in any sense definitive as to the forms and proportions of decorative objects. The marked tendency on the part of well to do Americans during recent years to search out and comprehend the wealth of suggestion and tradition embodied in early examples of native design and craftsmanship as supplying the most rational and interesting inspiration for the design, furnishing and decoration of American homes is one of the most encouraging signs of the times, and the opening of this new wing is, therefore, most timely.

A surprising thing about these collections is the marvelous variety in the character and origin of the productions included in the classification "Early American." It is so easy to assume a cut and dried view as to the derivation of our early work but here we find France, Italy, England, Spain, Holland, Germany, Greece and the Orient all contributing bountifully to the inspiration of these early works of ours and the distinct impression left by a comprehensive view of them is that our artistic forbears were a wide awake company quick to recognize and modify to their needs the suggestions from the past, whatever the source, and to bring them into that harmonious relation which made them characteristic of their own time. This constitutes the very essence of "style" as opposed to "historic style."

We may hope, therefore, that this great assemblage of American things may prove the most important element in transforming something that might have been a mere passing vogue into a steady, healthy influence which shall permanently leaven our arts and industries.

J. MONROE HEWLETT, *Chairman.*

Public Information

The Institute's Executive Secretary has received a letter from the George H. Morris Organization, a real estate company, asking whether the Institute would be willing to send copies of the "Functions of the Architect" to their lot purchasers, who are contemplating building homes, provided the organization furnishes the Institute with their names and addresses. This is an interesting indication of advance in the right direction. The Public Information Committee would like each architect who reads this article to take up with any real estate organizations, with whom he may be in touch, the initiation of a similar activity. The result would have a far-reaching effect in the education of the public.

BALTIMORE CHAPTER has been continuing its publication of articles, and has induced the local press to publish

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a review or critical analysis of buildings recently completed. These reviews are not written by an architect, although Mr. Scarff has given the writer some assistance. They are published with a photograph and treated in much the same way as a book review.

COLUMBUS CHAPTER has been busy since the first of the year with the formation of an Association of Architects known as the Allied Architects Association of Columbus, Ltd., to perform architectural service in connection with the construction of a new City Hall. This Association has been successfully organized on a pattern similar to that of the Los Angeles Association and has received the contract for the City Hall work from the City Council.

For a number of years the COLUMBUS CHAPTER has been interested in a comprehensive scheme for the development of the Civic Center to include the new City Hall and various other public and semi-public buildings to be erected within the next few years. It has been its idea to locate the Civic Center along the river front and to urge upon the city the necessity of a logical and proper development of this ground. The location of the new City Hall in this territory has given the Chapter an opportunity to make a definite start toward carrying out its plan; and, parallel with the study which the Allied Architects' Association is making of the City Hall proper, the Chapter is making a study of a Civic Center plan.

As a result of this study, the Chapter determined that the ground purchased by the City for the new City Hall was not large enough for the proper development of the project and its opinion has prevailed with the City Council to the extent that a bond issue, the proceeds to be used for the purchase of additional ground, was submitted to the people. The Chapter Publicity Committee was busily engaged on a newspaper campaign in support of this bond issue, showing by means of photographs, drawings and newspaper articles, the advisability of purchasing the necessary additional ground.

INDIANA CHAPTER is participating in the Semi-Centennial Celebration at Purdue University and Fermor S. Cannon will represent the Institute at that time.

KANSAS CITY has before it, as one of its contemplated activities, an Art Appreciation week in which it is proposed that pictures will be placed in the windows of representative merchants. Letters have been issued to all the civic clubs in the city and in the cities of the surrounding territory asking the secretary to call to the attention of the members the fact that the members of the Institute are interested in giving efficient service, that it would pay any individual or corporation to employ recognized men to do their work, and that membership in the Institute is a sign of such recognition on the part of fellow architects. This letter also indicates that the local Chapter is willing and able to provide, upon call, speakers to talk upon subjects allied with the building industry. Another thing before the Chapter at this time is the preparation of a seal for placing upon the drawings of Chapter members. A competition has been held for this seal, closing at the end of May. This seal is to be loaned by the Chapter to the members and to be used upon prints, specifications and documents as issued. It is understood that the seal shall be returned to the Secretary whenever an architect moves from the city, or out of the Chapter's jurisdiction, or for any other reason is eliminated from his connection with the Institute. The Chapter is also assisting, when opportunity is given, in the propaganda for a new building code as well as for enforcement of the present code.

NEW YORK CHAPTER continues to issue articles to the press from time to time. Its Committee on Uneconomic Practices in the Building Trades has brought out a first report which it has confined to a "house cleaning," in other words, the architects' crimes as charged by the other branches of the building industry. It proposes to send a copy of this first report to each Chapter Secretary.

PITTSBURGH CHAPTER'S Public Information Committee has centered its activities around *The Charette,* which announces itself as "A Little Journal of Rejuvenation Published Every Month by The Pittsburgh Architectural Club." The Institute's Committee has already suggested that Chapters in cities where architectural clubs exist might imitate this example.

RHODE ISLAND is making arrangements with Mr. Scarff, of Baltimore, to use his material and is also going to publish Mr. Ludlow's letter prepared by New York's Chapter's Fire Prevention Committee.

ST. LOUIS CHAPTER has a newly appointed Public Information Committee with Harry D. Payne as Chairman. They have laid out a very comprehensive program of work. Although the formation of a program does not necessarily mean work done, it is a first step of the greatest importance and one that those Chapters that have not yet shown initiative in the matter of public information ought to follow immediately.

JOHN V. VAN PELT, *Chairman.*
126 East 59th St., New York City.

Current Activities

SCIENTIFIC RESEARCH DEPARTMENT
PRODUCERS' RESEARCH COUNCIL
STRUCTURAL SERVICE COMMITTEE

On 13 March, 1924, a second conference was held at the Department of Commerce to consider a modified recommendation. At this conference the Institute was represented through the Scientific Research Department. This second recommendation seemed to meet the approval of the producers although it did not go as far as some of the dealers and consumers would have desired. From the standpoint of the architect no objection could be raised to either the revised or original simplification program.

Meeting of the Producers' Research Council. At a meeting of the Council held in New York City on 11 April, a copy of the proposed Constitution and By-laws was submitted for discussion before being submitted for adoption at the Annual Meeting in Washington 20 May. Many of the leading manufacturers of the country were represented at this meeting and much interest was shown in the movement to promote better relationship between the architect and the producer.

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Conference on Lumber Standards. Mr. E. S. Hall represented the Institute at a conference held at the Department of Commerce, Washington, D. C., on 22 April, to consider additional lumber standards. Recommendations were adopted covering the subjects of basic grades for yard lumber; odd and short length lumber; bundling; grade marking; rough dry yard lumber; mouldings; simplification of workings; tally cards to accompany shipments; shipping provisions; shingles; and inspection service.

The principle of grade marking was approved and the recommendation adopted calls for marking of the grade on No. 4 Common and better grades, and that on lower grades the grade mark be optional. This, it was declared, would put a check on the efforts of any unscrupulous dealers to sell inferior grades for those which the consumer ordered.

Recommendations for standard mouldings were altered at the request of the Institute, plans being made for new designs which shall be consistent with good architecture and the standard sizes of lumber.

Louis H. Sullivan

At the funeral services held at Chicago for Louis H. Sullivan, who died in that city on 14 April, 1924, a memorial tribute was read by Mr. Wallace Rice. We reproduce, in part, Mr. Rice's words:

"In the restless civilization of today it seems probable that those edifices designed by Louis Sullivan, however enduringly built, will pass. But a more enduring monument will remain in *The Autobiography of an Idea,* his memoirs and the story of his notable career, and it is of interest to know that the first published copies of this work were placed in his hands on his death-bed.

"Sullivan was born in Boston on 3 September, 1856, and was taken in the 68th year of his age. He was the son of Patrick and Adrienne S. Sullivan. His education was received at the Massachusetts Institute of Technology and in the Ecole des Beaux Arts in Paris, after attendance upon the public schools of Boston. In his later years he was honored by membership in many societies, and by the gold medal awarded him by the Union Centrale des Arts Decoratifs of Paris in 1894.

"Removing to Chicago with his parents in 1880, when 24 years of age, he achieved speedy professional success, early forming a partnership which lasted until 1895 with the late Dankmar Adler. He lectured on his profession for many years at the Art Institute in Chicago and in the architectural school of the Armour Institute there, and was regarded by his students as the most inspiring of teachers.

"He was an untiring and voluminous writer in setting forth his fundamental conceptions of architecture as an art springing from the people, and criticising all who sought to express modern American civilization in terms of other ages and climes. One of his last efforts in this direction was against the award made by the *Chicago Tribune* for its building now in course of construction. He wrote, too, an unpublished work entitled 'Democracy,' expressing his passionate, fairly religious, belief that good could come only from the mass, and it was his firm belief that the proof of it lay particularly in French Gothic.

"For two years at least before the end Louis Sullivan was in broken health, and those who knew him best feel assured that the action of his professional colleague in securing for him a market for the serial publication of his memoirs and its eventual publication in book form, by giving his active and prolific mind the most suitable employment imaginable, prolonged his life until this time, just as severe personal loss soon after the completion of the work did much to hasten the end.

"Unskilled in narrative, the earlier chapters of his monumental work bore the impress of the amateur in writing. Curiously, in youth he had deliberately sought the severest limitation of his vocabulary, which added to this impression. But it is an evidence of his youthful open-mindedness that as the work progressed, he saw the unwisdom of depriving himself in a real sense of the materials with which he must construct his literary edifice, and he became profoundly interested and correspondingly skilled in words and their full significance.

"The result speaks for itself in the later chapters of his book, which sets forth not only the facts in his physical life but the growth of his intellectual and spiritual being no less. Within the space of a few months he mastered the difficult art of writing and made it serviceable to his utmost needs, a feat as difficult of achievement to his many literary friends as a corresponding mastery of the art and science of architecture in a similar period would have been to any of them, who regard it as a positive evidence of nothing less than genius.

"In addition to his commemorative writing, Sullivan exemplified in a volume published with it and entitled *The System of Architectural Ornament,* the result of his brilliant and original investigations and experiments in the art of design, filled with plates of the utmost beauty and done with an eye as sure and hand as skilled and steady as that of any youth. The original drawings repose in the Burnham Library of the Chicago Art Institute.

"Wise with years and mellow with experience, Louis Sullivan was the most vivid and interesting of companions. Essentially friendly and always generous, he gathered about him a host of friends, who rejoiced in his wit and wisdom. He bore his sufferings uncomplainingly, and it is expressive of his attitude that at the last, when his right hand and arm became useless, his only comment was, 'How lucky that this didn't happen a year ago, or I couldn't have finished my books!'

"He was a great artist, a great American, a believer in humankind and eagerly appreciative always of the merits of others. The successes of his former students and pupils, notably the success of his friend, Frank Lloyd Wright, were taken as an affectionate father takes with pride the noteworthy achievements of his sons, and his pen was always at their service for public praise.

"Louis Henri Sullivan was a commanding and picturesque figure in the long battle between originality and tradition, between philistinism and beauty in all its forms, a student and amateur in music and painting, and a sincere lover of his kind.

WALLACE RICE.

A Fragment of Mosaic

From the second half of the 13th century until the beginning of the 17th century, faience mosaic formed the most important surface decoration of Persian architecture. The fragment of colored mosaic illutrated upon the opposite page is said to have been taken from the holy mosque of Imam Riza in Meschhed. At all events it must have belonged to a building similar in character to the Blue

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A Fragment of Faience Mosaic
Ascribed to the Imam Riza
Mosque at Meschhed.

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Mosque of Febriz. It is a splendid example of the best period of Persian faience. Each piece of mosaic is cut or sawed out of a larger unit, making possible a closer fit and narrower joint than can be obtained by first molding and then firing individual pieces of a mosaic ornamentation.

The Development of Washington

In concluding the report of the Washington Committee of One Hundred, parts of which have appeared in the last three issues of the JOURNAL, we present the abridged statements of the three remaining sub-committees. Through an oversight, we stated in our May number that Mr. Horace W. Peaslee, chairman of the Committee on Co-operation with the Commission of Fine Arts, was likewise chairman of the Committee of One Hundred, although Mr. Frederic Delano actually occupies this chair.

The reports follow:

Extensions of Metropolitan Washington [1]

The remarkable recent growth in Montgomery, Prince George counties, Md., and Arlington County, Va., calls for closer relationship and co-operation between these areas, so intimately associated that planning of areas outside the District should be co-ordinated with the planning of the city. Here we reach the problems of park reservations; proper and necessary boulevards out of Washington; preservation of stream beds and conservation of water flow and sanitation, calling for early action.

In treating the park extension proposition the Committee has in mind providing wooded areas of natural beauty and preserving the water supply of streams in and near the District. While the Patuxent and Patapsco do not immediately affect it, conservation of their stream-flow into large forested areas as parks and playgrounds, connected by fine roads with the District, would afford the growing population a much larger playground than possible closer to the city.

We hope for future co-operation between the city and Maryland to construct an ideal park boulevard connecting the District with Metropolitan Baltimore, a short, direct route. Such a boulevard would connect all the parks herein suggested. Today the suburbs of these cities are but 25 miles apart, and their joint growth should be considered. It is easy to see a huge community from city to city, an enormous increase in traffic and general betterment of boulevards and State highways leading to Washington. Reservations should be made while possible.

Between Baltimore and Washington run the Patuxent and the Anacostia tributaries, while Washington has Rock Creek extending far into Maryland. Between the District and Baltimore, these streams flow through the Piedmont Area in valleys of marked natural beauty. This land is almost untouched, and could be cheaply acquired today. Linking these cities by a boulevard connecting the park reserves along the way will conserve water supplies and mark a distinct achievement in regional planning.

The streams, valleys and park sites pointed out are briefly summarized as follows:

Rock Creek within the District forms Rock Creek Park, the largest in the Capital; beyond the district is a picturesque winding stream for several miles into the agricultural country, still preserving much of its natural beauty, fast passing to speculators who will capitalize it as a desirable place for residence outside of the city.

Northwest Branch leaves the Anacostia about a mile beyond the District line and almost parallels its Northeastern line. Its source lies 25 miles away. For 10 miles it passes through a beautiful rock-bound valley. It is in one of the deep gorges of this stream that an impounding reservoir with a large storage capacity is being erected, as the principal source of water supply for all Maryland surrounding the District. The Sligo, tributary of the Northwest Branch, should likewise be preserved.

The Three Patuxents (Patuxent, Little and Big Patuxent). The Little Patuxent near Savage branches into the Little and Middle Patuxent, thus west of the B. & O. railroad there are three streams, each with a very considerable flow, traversing natural and almost untouched valleys, and (aside from their attractiveness as possible parks) of tremendous importance in insuring future water supply.

The Patapsco (both main stream and South Branch) hardly needs comment. The State has established a small forest reserve through part of this valley, but we know no recent effort to enlarge it.

These valleys are an important future water supply; the need for preserving them as future playgrounds and parks must be considered and the ease and cheapness with which they can now be acquired makes the plan feasible.

A bill for a comprehensive development of the Capital Park System (see report of Committee on Parks and Forest Reserves) and for co-operation between the Federal Government and Maryland and Virginia, and acquisition of lands, is in Congress.

Whether the south shore of the Potomac shall be developed with Potomac Park or whether it is to grow in haphazard fashion is of vital importance. The south bank from Alexandria to Great Falls should be acquired for parks. It will some day be desirable to beautify both banks within the original District. Land should be bought now while vacant and cheap. It is vitally important to preserve for park purposes the Virginia shore from the railroad bridge to Chain Bridge, much of which is already owned by the United States, including the Agricultural Experiment Station farm. Little additional land would have to be acquired to complete the connection between the Key Bridge and the railroad bridge.

The Potomac above the Key Bridge, along the base of beautifully wooded bluffs, should be preserved. It is lined in summer with camps and is alive with water craft, and a most important outdoor playground.

It was hoped the present Congress would authorize the beginning of construction upon the Memorial bridge. Actual construction work will have a far-reaching effect upon the character of development of the surrounding territory.

Ground at the south end of the Key Bridge should be acquired to prevent congestion there. It will be a link in any park and forest system extending along the south bank.

A bill (H.R. 524) provides for a memorial road to Mount Vernon.

Waterfront Development [2]

The waterfront problem presents unusual features: the federal and municipal governments own and control practically all the harbor and river frontage within the city;

[1] Wm. T. S. Curtis, *chairman*; E. Brooke Lee, Ben Temple Webster, Frank G. Campbell, T. Howard Duckett, Oliver Metzerott, D. J. Howell, Harry F. Cunningham.

[2] Frank P. Leetch, *chairman*; J. Miller Kenyon, Wm. L. Radcliffe, Wm. T. Galliher, Arthur J. May, Charles G. Warden, John H. Hanna, Geo. L. Nicolson, Waddy B. Wood.

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the government has the burden of caring for and developing all harbor terminal facilities; the government has developed and is developing the park areas fronting the river on a scale commensurate with the dignity of the capital, but the commercial harbor has fallen into decay and unsightliness, long a serious concern.

Though Washington is not commercial, there is considerable water traffic, and the future will demand better terminal facilities. This restricted waterfront between the railway bridge and the government reservations to the east, reserved for commercial uses, should not remain as it is. Careful study of the whole harbor, survey of all commercial factors, and consideration of the close physical relationship of the area to the government reservations, east and west, and East Potomac Park across the channel to the south, is necessary.

Industrial Development and Limitations [3]

The commercial life of Washington centers around the living costs of the 80,000 Federal employees and their families, requiring the services of 40,000 to 50,000 other persons. Manufacturing is limited indeed. Except the supplying of food, clothing, etc., building, coupled with real estate development, is decidedly the largest activity.

The city should be better balanced in employment possibilities. It can never develop industrial enterprises; consequently will not be an industrial competitor of any other city. The environment of her people is such that factory wage earners are not attracted. Nuisance-making industries have no place. The buildings and monuments should not be subjected to deteriorating conditions. Heavy trucking and hauling is not desirable.

Light manufacturing of a non-injurious character, located within existing industrial zones, employing large numbers of people now dependent on other wage earners, would meet local needs. Many items for local use, utilizing electric power, could and should be manufactured in the District, creating occupation for many now forced dependents; unemployment would be diminished and incentive to work in industrial activities be greatly encouraged.

Heavy manufacturing and large industrial activities are not desirable nor economically feasible.

Letters to the Editor

Built-in Plumbing Fixtures

TO THE EDITOR OF THE JOURNAL:

With the introduction of the built-in plumbing fixture the work of the plumbing contractor has been subjected to more than the ordinary hazards of damage by other building trades.

Formerly the setting of plumbing fixtures was one of the last operations in completing a building and the damage was minimum. With the built-in fixture, however, the fixture must be installed immediately after the roughing-in to enable the tile setter or plasterer to finish his work.

This situation has increased the percentage of damaged fixtures, and also increased the cost of reinstallation, for the plumber is not only obliged to reinstall a more expensive fixture than formerly, but must also replace the work of the tilesetter or plasterer which is necessarily destroyed in removing and replacing the built-in fixture.

The plumber is covered by a manufacturer's guarantee protecting him only against defects in manufacture, but of course not against consequential damage. Nor is any consideration accorded him for the cost of removing and replacing any fixture which may prove defective after installation.

Recourse for reimbursement on fixtures damaged by other building trades is included in the standard building contract, providing the responsibility can be affixed. This, however, can seldom be done, with the result that the plumber must remedy the unsatisfactory condition at his own expense.

Plumbing fixtures—especially a built-in bathtub—are perhaps the most expensive single units installed in ordinary construction. For that reason, and because of their increased liability to damage, the National Association of Master Plumbers adopted the following resolution at their last convention, in the hope that it would be of assistance in placing the responsibility for damage where it rightfully belongs. Architects will undoubtedly recognize that this changed condition demands a change in practice and will be glad to show consideration to the plumbing contractor and assist him in effecting a remedy.

RESOLUTION.

Resolved, That hereafter in all cases where the specifications and contract call for the installation of "built-in fixtures," especially bathtubs, the following clauses, or their substantial substitute, shall be written and made a binding part of the plumbing contract:

(a) It is agreed that the terms "perfect," "imperfect" and "defective," as herein used, shall be defined in accordance with the definition set forth in that which is known as the "manufacturer's guarantee."

(b) After the installation of the built-in bathtubs, or other built-in fixtures, the contracting plumber shall thoroughly clean and examine them before they are tiled in, or plastered in, and he shall give written notification to the architect, the owner or the owner's representative that the bathtubs are ready for inspection.

(c) If within five (5) days from the receipt of this notification the architect, or the owner, or the owner's representative shall not have in writing notified the contracting plumber to the contrary, then it shall be understood that the bathtubs submitted for inspection are satisfactory and are accepted and that all claims for damages, imperfections and defects are waived. It is provided, however,

(d) That if the architect, the owner, or the owner's representative is dissatisfied with the quality or the installation of the bathtubs submitted, then in this event written notification stating the nature of the dissatisfaction shall, in writing and within the herein stipulated five (5) days, be given the contracting plumber, and upon the receipt of such notice such faults of installation as are complained of and such corrections by substitution of bathtubs as are provided for under the manufacturer's guarantee shall be made by the contracting plumber without additional cost to the owner.

(e) And it is further provided that if, within one (1) year after the enclosure of the built-in bathtubs, the architect, the owner, or the owner's representative shall make a claim that any of the said bathtubs has a manufacturer's defect, and that the manufacturer who supplied the said bathtub agrees that said defect exists and furnishes a new tub to substitute the defective one and free of cost to the owner, then in this event, and on receiving written notification from the architect, the owner, or the owner's representative, the contracting plumber shall in conjunction with the manufacturer install such new tub without cost to the

[3] Edwin C. Graham, *chairman;* Clarence A. Aspinwall, William J. Eynon, William F. Roberts, Charles H. Tompkins, Arthur Carr, Elliot C. Goodwin, Claude W. Owen.

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owner, but under no conditions or circumstances shall the contracting plumber be under obligation to replace tile or plaster work in connection therewith, or to defray any expense thereof.

Very truly yours,

NATIONAL ASSOCIATION OF MASTER PLUMBERS.
SAMUEL F. WILSON, *President.*

TO THE EDITOR OF THE JOURNAL:

The subject matter of the letter from the National Association of Master Plumbers seems to me to claim the thoughtful attention of architects. The question of the replacing of damaged material is always a troublesome one, and one which frequently involves hardship, especially where the defect is in a manufactured product, over which the contractor who installs it has no control. The replacement of such damaged material is a normal business risk, however, which contractors must assume in order to give reasonable protection to owners. It is right, however, for architects to endeavor to prevent hardship in such replacement where damage may be caused by the carelessness of other mechanics, especially where the cost of the fixtures is quite substantial, as in the case of built-in bathtubs.

Normally the approval and acceptance of the work is given at final completion. It seems to me that there is justice in the contention of the master plumbers that so far as they are concerned, the fixtures should be inspected and accepted when installed by them and before the work of the many other adjacent trades has been completed. It is during this subsequent work that the fixtures are constantly subject to damage, and the lack of respect for the work and equipment installed by other mechanics is quite a troublesome condition, which, however, seems to exist with the mechanics in most of the trades. If the responsibility of the plumber can be definitely removed by such acceptance, I believe it will act to increase very materially the care which the other mechanics will take, as the chance of having the damage traced to their acts will be very greatly increased.

There may be some legitimate difference of opinion in regard to details of the phraseology of the resolution passed by the master plumbers, but it seems to me the purpose of it is reasonable, and that it is a subject which the JOURNAL may well call to the attention of the members of the Institute by publishing their letter. Very truly yours,

WILLIAM STANLEY PARKER, *Second Vice-President.*

Jurisdictional Awards

Gunnite Work or Handling of Cement Gun

[Subject of dispute between the International Hod Carriers, Building and Common Laborers' Union, Operative Plasterers and Cement Finishers' International Association and Bricklayers', Masons' and Plasterers' International Union.]

Decision rendered 21 *February,* 1924.

In the matter of the dispute referred to in the foregoing title, the following decision was reached:

When work to be performed is to be of the thickness of one and one-half inches or greater, the handling of the cement gun shall be by the Laborers. When the work is less than one and one-half inches in thickness, the handling and control of the nozzle shall be the work of the Plasterers and Cement Finishers.

It is understood that this decision does not allow to the Laborers the right to finish where any finishing tools are required.

The application of a cost of cement mixture by means of the cement gun on steel, as a protection against corrosion, is not included in this decision.

Plastering Work for Preparation of Walls and Ceilings for Tiling

[Subject of dispute between the Bricklayers', Masons' and Plasterers' International Union and the Operative Plasterers' and Cement Finishers' International Association.]

Decision rendered 21 *February,* 1924.

After reviewing the controversy in its various phases, the determination is reached that the agreement previously existing between the two organizations affords the most practical plan of adjustment, and the following award is therefore made as the decision of the Board:

Plasterers shall prepare or plaster all walls and ceilings which are to receive tile, except the final setting bed, which shall be applied by the Tile Layers; three bathrooms, vestibule and small hall in single private residences shall be plastered by the Tile Setters.

Setting, Installing or Sticking of Artificial Stone

[Subject of dispute between the Bricklayers', Masons' and Plasterers' International Union and Operative Plasterers' and Cement Finishers' International Association.]

Decision rendered 21 *February,* 1924.

In the matter of the controversy between the Bricklayers and Masons and the Plasterers and Cement Finishers over the setting, installing or sticking of artificial stone, it is decided that the setting, installing or sticking of all artificial stone which is reinforced with burlap or other fibrous material, whether cast or fabricated in shop or on the job, is the work of the Plasterers and Cement Finishers; and the setting, installing and sticking of all artificial stone which is not reinforced with burlap or other fibrous material is the work of the Bricklayers and Masons.

New Members Elected

John Platt Roberts, *Mobile,* ALABAMA; Chas. L. Morgan, *Chicago;* Glenn A. Hacker, *Palisade,* NEW JERSEY; Royal Dana, Warden H. Fenton, Douglass Fitch, Ernest A. Grunsfeld, Jr.; Harry V. K. Henderson, Arthur Louis Harmon, Charles S. Keefe, Leland Hubbell Lyon, Bernhardt E. Muller, W. Irving Norris, James M. Scheiner, John Sloan, D. A. Summo, Harry Edward Warren, Ralph Wilson Weirick, Frederick E. Winter, *New York;* Ralph O. Beattie, *Los Angeles,* SOUTHERN CALIFORNIA.

Announcements

F. D. BURGE has removed his offices to 101 Marietta Street, Atlanta, Ga.

A. F. GILBERT has removed his offices to 358 Fifth Avenue, New York City.

LEWIS I. THOMPSON has moved from Portland, Ore., to New York City, with an office at 79 Fifth Avenue.

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J. P. RUSSETT now has offices in the Valley National Bank Building, Des Moines, Iowa.

MEYER J. STURM announces his removal to the Church Street Building, 708 Church Street, Evanston, Ill.

ERNEST WILBY has removed from Windsor, Canada, to Ann Arbor, Mich., with an office in the Engineering Building, University of Michigan.

ROY A. BENJAMIN, since the dissolution of the firm of Greeley & Benjamin, has opened an office in the Bisbee Building, Jacksonville, Fla.

THE Executive Secretary of the Institute asks the assistance of members in tracing Mr. William F. Evans, Jr., an Institute member, once of Seattle, Wash., and later residing in New York City, where his last known address was 243 West 36th St.

WE have received an interesting book describing the Fontainebleau School of Fine Arts and giving details of the 1924 session, 25 June-25 September. Applications for the admission of architectural students should be made immediately to Mr. Whitney Warren, Fontainebleau School of Fine Arts, 119 E. 19th St., New York City.

THE annual conference of the Royal Institute of British Architects will be held at Oxford, 9-12 July. A number of interesting events are planned. Members of the American Institute of Architects in England at that time will be most welcome at the conference, according to its secretary, Ian MacAlister, 9 Conduit street, Hanover Square, London, W. I, who will be pleased to hear from any architect who contemplates attending this affair.

Obituary

Val P. Collins

Elected to the Institute in 1909.

Died in Louisville, Ky., 24 December, 1923.

The death of Val P. Collins was a sudden and unexpected event, although it had been known for some time among his associates in the profession that he had been in a rather indifferent state of health. In the course of his professional practice, he had executed a number of commissions not alone in Louisville, but throughout the state of Kentucky. His work consisted principally of large residences, schools, Y. M. C. A. buildings, and structures of a similar character, we are informed. He had been secretary of the Kentucky Chapter for some 12 years, and had served one term as president. Mr. Collins was a charter member and, later, president of the Engineers and Architects Club of Louisville, a group organized in 1891. He was about 55 years of age at the time of his death.

George H. Clemence, F. A. I. A.

Elected to Fellowship in the Institute in 1896.

Died at Worcester, Mass., 2 February, 1924.

George Henry Clemence, a member of the Boston Society of Architects and a fellow of the Institute, was born in Worcester in 1862 and had lived in his native city all his life. He received his early training in the office of Stephen C. Earle and in 1886 entered the Massachusetts Institute of Technology. In 1892 he became a practicing architect and attained a prominent position in the profession through the excellence of his work and his personal popularity. Among the best of his buildings are the Worcester Fire Department Headquarters, the Police Department and District Court Headquarters, and also many fine residences.

The personality of Mr. Clemence won him many friends, who will long remember his unassuming manner, his cheerful greetings, his inborn integrity, and the fortitude displayed in his long fight against failing health.

Lewis Colt Albro

Elected to the Institute in 1921

Died at New York City, 1 March, 1924

Lewis Colt Albro was born in Paris on 4 February, 1876, was educated at Pittsfield, Mass., and attended the Metropolitan Art School, Metropolitan Art Museum, under the auspices of Columbia University. He entered the office of McKim, Mead & White and there remained for some thirteen years. Then, in a partnership with Harrie T. Lindeberg and under the firm name of Albro & Lindeberg, he practised for a number of years, producing many notable examples of domestic work and some commercial structures. This partnership was dissolved about ten years ago, since when he had practised alone, confining his talents principally to private houses. Mr. Albro distinguished himself during his career not so much for the variety or magnitude of his commissions as by the character and quality of each piece of work entrusted to him.

Through his untimely death the profession has lost an able practitioner, who through the influence and character of his work has contributed a worthy example.

D. EVERETT WAID
HOBART B. UPJOHN.

Richard Sharp Smith

Elected to the Institute in 1913

Died at Asheville, N. C., 14 February, 1924

Richard Sharp Smith was born at Harding, Yorkshire, England, on 7 July, 1852, and received his early architectural training in the office of his cousin, George Smith, at Bardford, Yorkshire, and later in various Manchester offices.

Coming to the United States in 1882, he was first connected with Reed Brothers, Evansville, Ind., but in 1883 went to New York City to enter the office of Bradford Gilbert. From 1886 to 1895 he was in the offices of R. M. Hunt. Six years of this period he spent as supervising architect of the Biltmore House, Biltmore, N. C.

At the completion of this work, in 1896, he opened his own office at Asheville, N. C., and there continued the practice of his profession up to the time of his death. He was a member of the North Carolina Chapter.

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FOUNDATIONS

The development of an idea, the practice of a profession, the structure itself, each requires a foundation sound and well conceived. So to perpetuate our art we must everlastingly keep in mind the training of the younger architect and the education of the coming generation.

The Idea Developed

The Allied Architects Association of Los Angeles is laying the foundation for better education and training by the establishment of a Fine Arts and Architectural Library. Already books in quantity are being supplied to institutions seeking to promote Architecture. It is fast acquiring documents and material for the use of the Architectural student. These facilities are being broadly developed for usefulness to the profession and the public. The Association is determined to make this Library an outstanding factor in education.

Performance

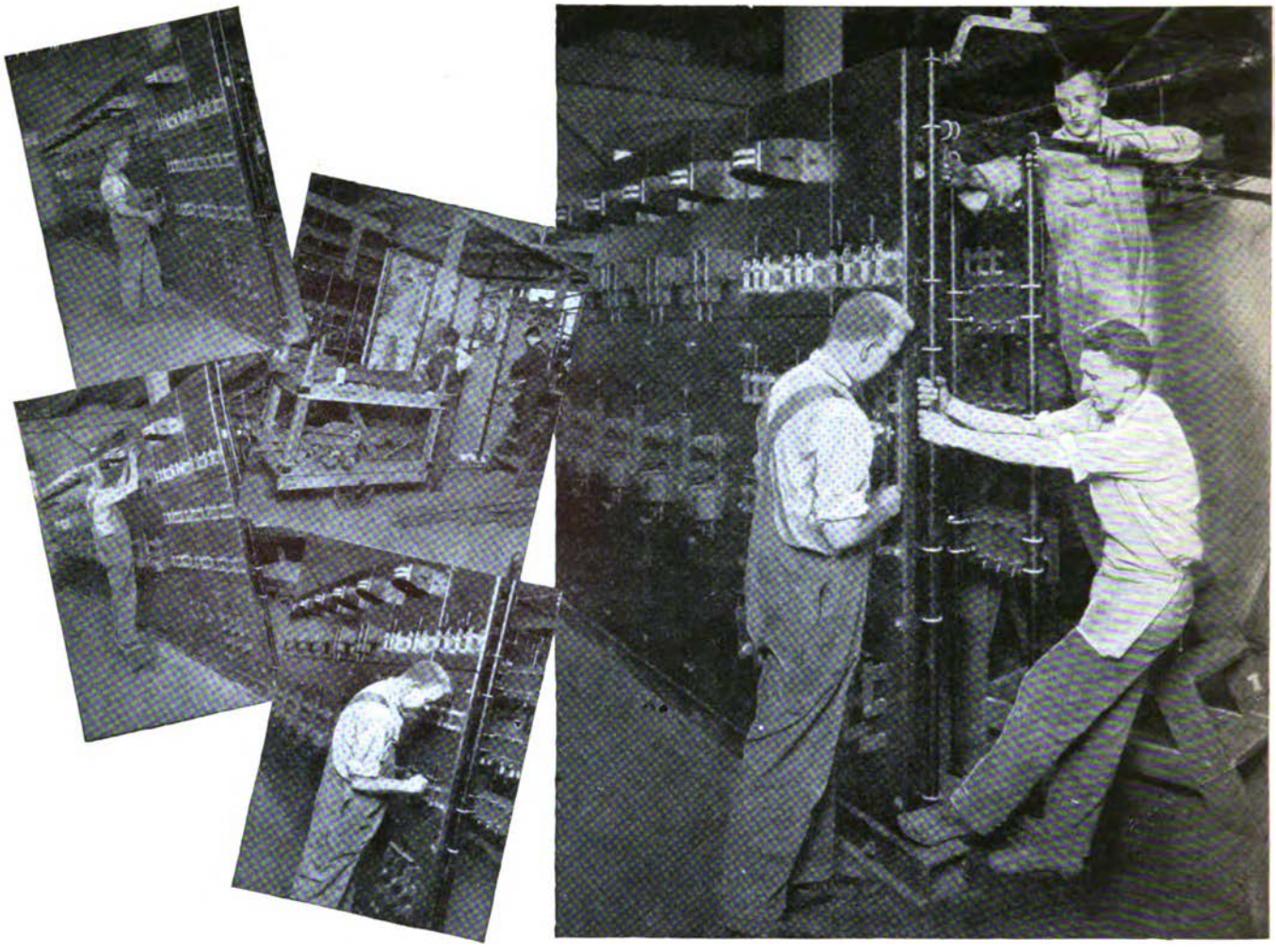
The Library is but one of many important activities being undertaken. By means of published articles the standing of the profession in the community and the value of architectural service is brought to public attention. By co-operation with other associations and institutions the educational movement is encouraged. Through the collaboration of its members, the Association is designing and supervising public buildings. In the actual performance of this collective service it is vigorously striving to produce Architecture of a higher character.

Co-operation

The Association believes in the fundamental principle of extending its usefulness and helpfulness to include all those who pledge themselves with sincerity and devotion to the betterment of Architecture and the Allied Arts.

ALLIED ARCHITECTS ASSOCIATION
OF LOS ANGELES

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Switchboard Assembly

Assembly in Switchboards means the accumulation of finished products and their mounting upon panels or framework to form a complete switchboard.

G-E Switchboard Assemblers are artisans, who not only know the products they handle but also know the functioning of these products. The result of such assembly is obvious. Every device mounted upon a switchboard is adjusted with respect to its successful operation after installation. The completed board must then be inspected and approved by competent engineers who are versed in the requirements of the purchaser, both for design and installation.

Only in this way can the Architect be assured of a product complying with his specifications and properly fitting into his structure.

This is the seventh installment of the story of building quality switchboards. Next month we shall tell you something about switchboard devices. We trust that this series merits a place in your file 31c2 and shall be glad to send you any numbers necessary to complete it.

General Electric Company
Schenectady, N. Y.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL *jointly to give in this division, each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus accord architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

Sand for Plaster (3d3) (*Technical News Bulletin No. 83. Bureau of Standards*). Some time ago the Bureau made an examination of the plastering sands in use in 52 different cities, the original intention being to prepare a specification for this material. However, the preliminary investigation showed that this was not feasible since, because of economic conditions, a specification condemning sand locally available could not be enforced. The undertaking was therefore changed to an attempt to solve the question of how much sand could be used in lime and gypsum plasters, depending upon the quality of the sand. A large number of plasters were made from mixtures of different limes and gypsums and many different kinds of sand. These were tested for water carrying capacity, plasticity, time of set, shrinkage, and tensile strength. As a result of these tests the Bureau hopes to set a definite limit beyond which sand is not fit for plastering and within which the proportion of sand which will give the best job can be indicated.

Water Pipe Sizes for Plumbing Fixtures, Branches and Mains (29d). (*By Walter S. Timmis, Reprint from Journal of American Society of Heating and Ventilating Engineers.*)

The lack of data upon which to base water pipe sizes for plumbing fixtures, branches and mains is probably due to the great number of variables which enter into their proper determination.

Plumbing fixtures in common use, having what is known as good water flow, deliver the quantities of water per outlet as given in the accompanying Table 1.

TABLE 1. SUPPLY SIZES FOR FIXTURES AND MAXIMUM FLOW IN GALLONS PER MINUTE

FIXTURE	NUMBER OF FIXTURES									
Water Closets	1	2	4	8	12	16	24	32	40	
Gal. per min...	8	16	24	48	60	80	96	128	150	Tanks
Pipe size	½	¾	1	1¼	1½	1½	2	2	2	
Gal. per min....	30	50	80	120	140	160	200	250	300	Flush
Pipe size	1	1¼	1½	2	2	2	2½	2½	2½	Valves
Urinals										
Gal. per min...	6	12	20	32	42	56	72	90	120	Tanks
Pipe size	½	¾	1	1¼	1¼	1¼	1½	2	2	
Gal. per min...	25	37	45	75	85	100	125	150	175	Flush
Pipe size	1	1¼	1¼	1½	1½	2	2	2	2	Valves
Lavatories and Wash Sinks—based upon each faucet										
Gal. per min...	4	8	12	24	30	40	48	64	75	
Pipe size	½	½	¾	1	1	1¼	1¼	1½	1½	
Bath Tubs										
Gal. per min...	15	30	40	80	96	112	144	192	240	
Pipe size	¾	1	1¼	1½	2	2	2	2½	2½	
Shower Baths										
Gal. per min...	8	16	32	64	96	128	192	256	320	8" rain
Pipe size	½	¾	1¼	1½	2	2	2½	2½	3	head
Acid and Slop Sinks, Mfg., Kitchen and Laundry										
Gal. per min...	15	25	40	64	84	96	120	150	200	per hibh
Pipe size	¾	1	1¼	1½	1½	2	2	2	2½	a hibb

NOTE: The above sizes are based upon a pressure drop of 30 lbs. per 100 ft. In estimating risers and mains, the number of gallons for W. C. and urinals where flush valves are used is to be as given for tanks. The hot water faucets are to be disregarded when estimating risers and mains.

Water flowing in pipes is retarded by friction, the extent of which depends upon the velocity; this amount of friction is very great and is the cause of unsatisfactory service when pipes are too small. The amount of head necessary to overcome this friction is known as the friction head, which is usually expressed in feet. It is also known as pressure drop, usually expressed in lbs. per sq. in. per 100 ft. of pipe.

The source of water supplies for most buildings is below the fixtures and comes from street mains which deliver water at varying pressures on various floors; the pressure necessary to raise water from the point of entry or supply to the uppermost fixture is called the static pressure, if referred to in pounds, and the amount of elevation in feet is called the static head; the total pressure needed to discharge a given quantity of water is the pressure necessary to overcome friction in the pipes (when horizontal) plus the static pressure when the discharge is higher than the supply.

Pipes may be sized for giving any desired pressure drop per 100 ft. if run by using Table 5, from 5 lb. up to 150 lb. per sq. in. (column 4), and any pipe sizes from ¾ in. to 4 in. If the length of pipe under consideration is longer or shorter than 100 ft., the pressure drop will be proportionately greater or less than the pressure drop used. For instance, if the pressure drop is 10 lb. for 100 ft. of run, it will be 20 lb. for 200 ft. and only 5 lb. for 50 ft. of length. If the total pressure drop on 300 ft. of pipe should not exceed 15 lb., use the 5 lb. per 100 ft. pressure table—see column 4, Table 5.

Table 5, column 1, gives the vertical rise in feet to any fixture up to 150 ft. in height; column 2 gives the static head in lb. per sq. in. corresponding with the vertical rise, while column 3 gives the static head plus 15 lbs., which appears to be desirable for the top floor of a building having fixtures located not more than 50 ft. away from the main riser.

The pressures shown in column 3 do not include any allowance for friction in the main riser and these values would be greater by 1 lb. for every 10 ft. on the basis of a 10 lb. pressure drop per 100 ft.

The underlying principle involved in determining the proper pipe sizes for mains, risers and branches is so to regulate the sizes of these pipes that they will carry the maximum amount of water required of them and absorb by friction and static head all the pressure at the source and still deliver water at the fixture in sufficient quantity but at a pressure practically equalling zero or slightly above except that due to velocity of flow through the fixture.

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The accompanying Table 1 gives the amount of water in gallons which should flow per minute for the number of fixtures indicated of each different type, together with the branch pipe size necessary to carry this amount of water with a pressure drop of 30 lbs. per 100 ft. of run.

The volume of water required per fixture is reduced as the number of fixtures in each group is increased to take care of the factor of probable use.

TABLE 2. SIZES OF WATER SUPPLY BRANCHES

Fixture	Number of Fixtures					
Water Closet	1	2	4	8	12	16
With tanks	½	¾	1	1¼	1½	1½
With flush valves	1	1¼	1½	1½	2	2
Urinals						
With tanks	½	¾	1	1¼	1¼	1¼
With flush valves	1	1¼	1¼	1½	1½	2
Lavatories and Washing Sinks						
Per bibb	½	½	¾	1	1	1¼
Bathtubs	¾	1	1¼	1½	2	2
8" shower	½	¾	1¼	1½	1½	2
Slop and acid, manufacturing and laundry sinks, per bibb	¾	1	1¼	1½	1½	2

TABLE 3. WATER RISERS FOR MANUFACTURING BUILDINGS, LOFT BUILDINGS, APARTMENT HOUSES, HOTELS

Estimate gallons per minute by Table 1—Table of Supply Sizes for Fixtures, and assume the amount so determined is 100 gal.

Take 60 per cent for top floor. For each lower floor add 60 per cent of its total and deduct 10 per cent of the combined floors above, down to 40 per cent but not below.

Thus

			Pipe size with 10 lb. drop
10th floor	100 gals.	60% = 60	2"
10 & 9	200 x .60	90% = 108	2½"
10 & 9 & 8	300 x .60	80% = 144	2½"
10 to 7 incl.	400 x .60	70% = 168	3"
10 to 6 incl.	500 x .60	60% = 180	3"
10 to 5 incl.	600 x .60	50% = 180	3"
10 to 4 incl.	700 x .60	40% = 184	3"
10 to 3 incl.	800 x .60	40% = 192	3"
10 to 2 incl.	900 x .60	40% = 216	3"
10 to 1 incl.	1000 x .60	40% = 240	3"

Select from Table 5 pipe size for pressure drop selected, using preferably 10 lb. drop per 100 ft.

TABLE 4. FOR RESIDENCES

Use Table 1 and for the main supply use 25 per cent of total of gallons used by fixtures and then take pipe size from Table 5 on a basis of 10 lb. pressure drop per 100 ft. or less if water supply pressure is less than 50 lb.

The pressure drop of 30 lb. per 100 ft. of run will give satisfactory results for branches on the top floor but a higher pressure drop can be used on floors below corresponding with the pressures as given in Table 5, which show that for a building 100 ft. in height a pressure drop of 100 lb. can be used on the fixture branches and that for a building 50 ft. in height a pressure drop of 75 lb. can be used on the fixture branch. Table 1, however, can be used with safety on any of the floors but will give pipe sizes larger than necessary for the lower floors in a very tall building.

TABLE 5. PIPES MAY BE SIZED FOR GIVING ANY DESIRED PRESSURE DROP PER 100 FT. OF RUN

Col. 1 Vertical rise of water to fixture in feet	Col. 2 Static pressure in per sq. in.	Col. 3* Pressure in lb. per sq. in. needed for good flow at fixture based upon 15 lb. at top floor	Col. 4 Friction pressure drop lb. per sq. in. per 100 ft. run
			5
			7
			10
			20
0		15	30
10	4.33	20	40
20	8.66	24	50
30	12.99	28	
40	17.32	33	
50	21.65	37	75
60	25.99	41	
70	30.32	46	
80	34.65	50	100
90	38.98	54	
100	43.31	59	
110	47.64	63	125
120	51.97	67	
130	56.30	71	
140	60.63	76	150
150	64.96	80	

NOTE: This pressure as given is based upon a pressure drop of 15 lb. in a run of not more than 50 ft. which will permit the top floor branches to be sized from the table opposite of 30 lb. drop per 100 ft. of run.

The pressure drop on the lower floors may be greater, as the static head increases the pressure available for branch connections. The pressures as given do not include any allowance for friction in the main riser which may be computed for any pressure drop per 100 ft. run from the table above.

Pipe Sizes in Inches								
¾	1	1¼	1½	2	2½	3	3½	4
Gallons Per Minute								
5.4	11	19	30	62	109	171	252	353
6.4	13	23	36	74	129	203	298	418
7.6	15	27	43	88	154	242	357	499
10.8	22	38	61	125	218	343	504	706
13.2	27	47	76	153	267	420	618	864
15.	31	54	86	176	308	485	714	998
17.	35	60	96	197	345	542	800	1115
21.	43	74	117	242	423	665	978	1365
24.	49	85	136	278	485	769	1130	1578
27.	55	96	152	311	544	858	1260	1765
30.	60	105	166	341	598	939	1380	1930

The water supply formula herewith makes it possible to accurately compute the flow of water in gallons through any pipe with any friction head and also gives formula for the additional head due to water entering the main, which, if extremely accurate calculations are necessary, should be added to the head required for friction; generally, however, this can be neglected, as it is comparatively small.

(To be continued)

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THE JOURNAL OF THE
AMERICAN INSTITUTE OF ARCHITECTS

Vol. XII JULY, 1924 Number 7

Planned Cities—III—Nancy

NANCY is certainly one of the most beautiful towns in France. Some, indeed, might go further and place it high amongst the towns of Europe, but it is essentially a town in which the architect will delight, owing none of its charm to its natural position, to some wondrous and dominating building, to a picturesque confusion, or to the dress and manners of its inhabitants. The particular beauty of Nancy, of its streets, its squares, and its buildings, is like that of precious gems in a piece of exquisite jewelry that are rightly subordinated and related to each other.

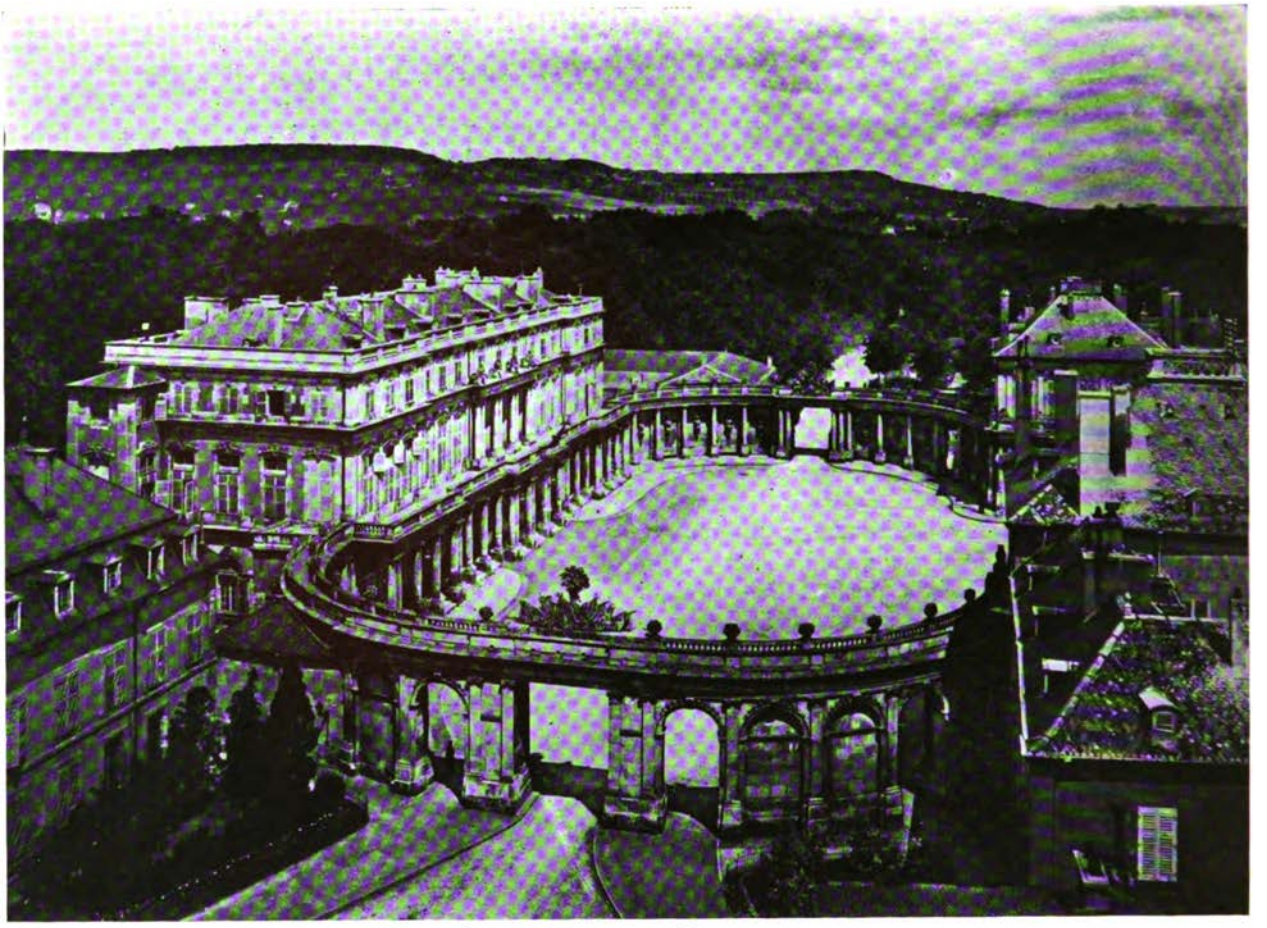
The predominating impression of Nancy is of an eighteenth century town, and indeed it does, in common with half the towns in Europe, owe most of its present form to the labor of that great town-building epoch. Actually, however, Nancy comprises three towns successively juxtaposed, and now, as it were, compressed into a whole like laminated stratæ. The first town lies centrally between the Cours Léopold and the gardens of the Pépinière; the second is the Nancy of the seventeenth and eighteenth century and has as its center the Place Stanislas, and lastly there is the new town which has grown up since 1820, owing to the influx of Alsatians.

The history of Nancy may be said to begin when Odelric defied the joint episcopal assaults of the bishops of Metz and Trèves at the end of the eleventh century. Soon after these events the town was strongly fortified and became the capital of the Dukes of Lorraine, increasing in importance until Charles the Bold, coveting it, met his death at its gates before the victorious René II. Then there continued the long line of the Dukes of Lorraine. Under Charles the Great the prosperity of the town increased and new fortifications were built. When he died in 1608, his subjects showed their respect by inaugurating vast and pompous obsequies which continued for sixty-four days. In 1633 Nancy, still coveted by the French, was besieged by Louis XIII, and taken, but the peace of Ryswick restored it to Duke Léopold, who began the central development of the city which reached its climax under Stanislas Lesczynski, the ex-King of Poland, and the last of the Dukes of Lorraine, for on his death in 1766, it became a French province.

The ordered beauty of Nancy, therefore, is preeminently the result of an autocracy, in this respect resembling the numerous German Court towns which developed so beautifully during the same period and from the same causes. For these princes and dukes gathered to their courts all the men of skill and brilliance. Each endeavored, indeed, to emulate the splendor of the Court of France. It was a period of vigorous Court etiquette, but it was a period, too, when the arts received scope and patronage. Thus it comes about that Nancy is French in architecture but German in spirit (is it then by more than coincidence that she brews some of the most delicious beer in Europe), for she is essentially the town of a small monarch.

Of the first part of the town, the town of the famous King René, scarcely anything remains today. What little there is lies athwart the Rue Ville-Vieille which threads the old town. Here is the fourteenth century ducal palace, mostly rebuilt after destruction by fire, but the portal is a very beautiful example of sixteenth century Gothic. The surviving wing of the Palace now contains the archæological museum, one of the most beautiful exhibits in which is the tapestry found in the tent of Charles the Bold after the siege of the city. Near by is the Church of the Cordeliers. Here in brief is the history of the Dukes of Lorraine, beginning with a curious eleventh century statue of Gérard d' Alsace, and passing on to the family of the Kings René, René II having a beautiful stone carved polychromatic screen erected over his remains. Leading out of the church is a circular mortuary chapel, added early in the seventeenth century, with a deeply coffered dome and containing the remains, in great

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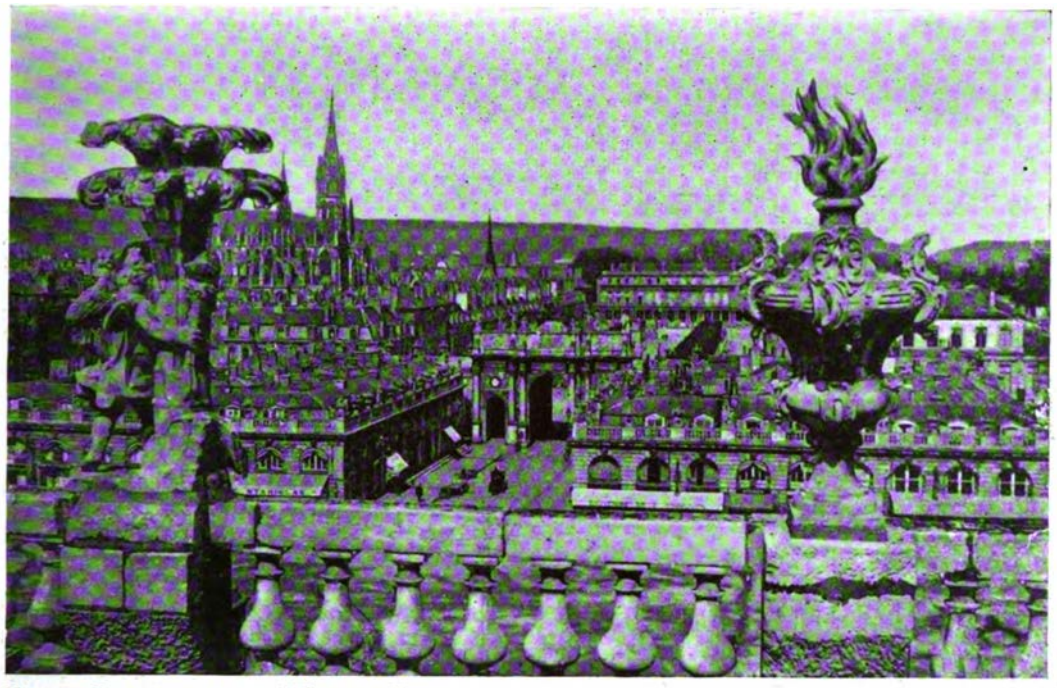


NANCY—LE PALAIS DU GOUVERNMENT AND HÉMICYCLE DE LA CARRIÈRE

black marble sarcophagi, of seven dukes of Lorraine.

The building of the second town was begun by Duke Léopold, who employed J. H. Mansart. His first and only work in Nancy itself was the Cathedral, a straight-forward dignified building, clean cut, but a trifle dull and uninspired. Mansart was followed by Boffrand, who began the Palais du Gouvernment and laid out the beautiful Place de la Carrière which takes its name from the erstwhile tournament ground. But scarcely had the work begun than it suffered a check owing to political disturbances and consequent financial embarrassments. The next architect was Héré, and to him is due most of the present beauty of Nancy. He completed the Place de la Carrière, flanking it with rows of small elegant houses and punctuating the extremities by a pair of taller and slightly projecting buildings. He linked up the Palais du Gouvernement with the top buildings of the Place de la Carrière in a masterly way by means of two curved screens, so that the whole is united by a continuous order. He also embellished the square with balustrades and statues and laid out the intervening space between the houses as a charming public garden with double rows of pleached plane trees, now grown into a cool green cloister. At the southern end of the Place de la Carrière he placed a triumphal arch, the most beautiful of many in the city, built at the command of Stanislas in honor of Louis XV. This arch forms a connecting link between the Carrière and the magnificent Place Stanislas, a wide open space as beautiful as any to be found in Europe. At first it seems that its beauty lies simply in its spaciousness, its elegance, the rhythmic symmetry of its buildings, and in the beautiful wrought-iron work picked out with gilding, of gates, screens, and lamps. A closer examination, however, reveals many subtler contributory causes. Entering the square from the triumphal arch one passes between blocks of low pavillion-like buildings, and sees opposite the long Hôtel de Ville, and on either side a pair of symmetrically placed buildings, housing the Grand Hôtel, the erstwhile bishop's palace (now the new municipal theatre) and the old municipal theatre, and one realizes that an effect of crescendo culminating in the bescrolled clock turret of the Hôtel de Ville has been most skilfully arranged. Had the northern end of the square been closed with equally high build-

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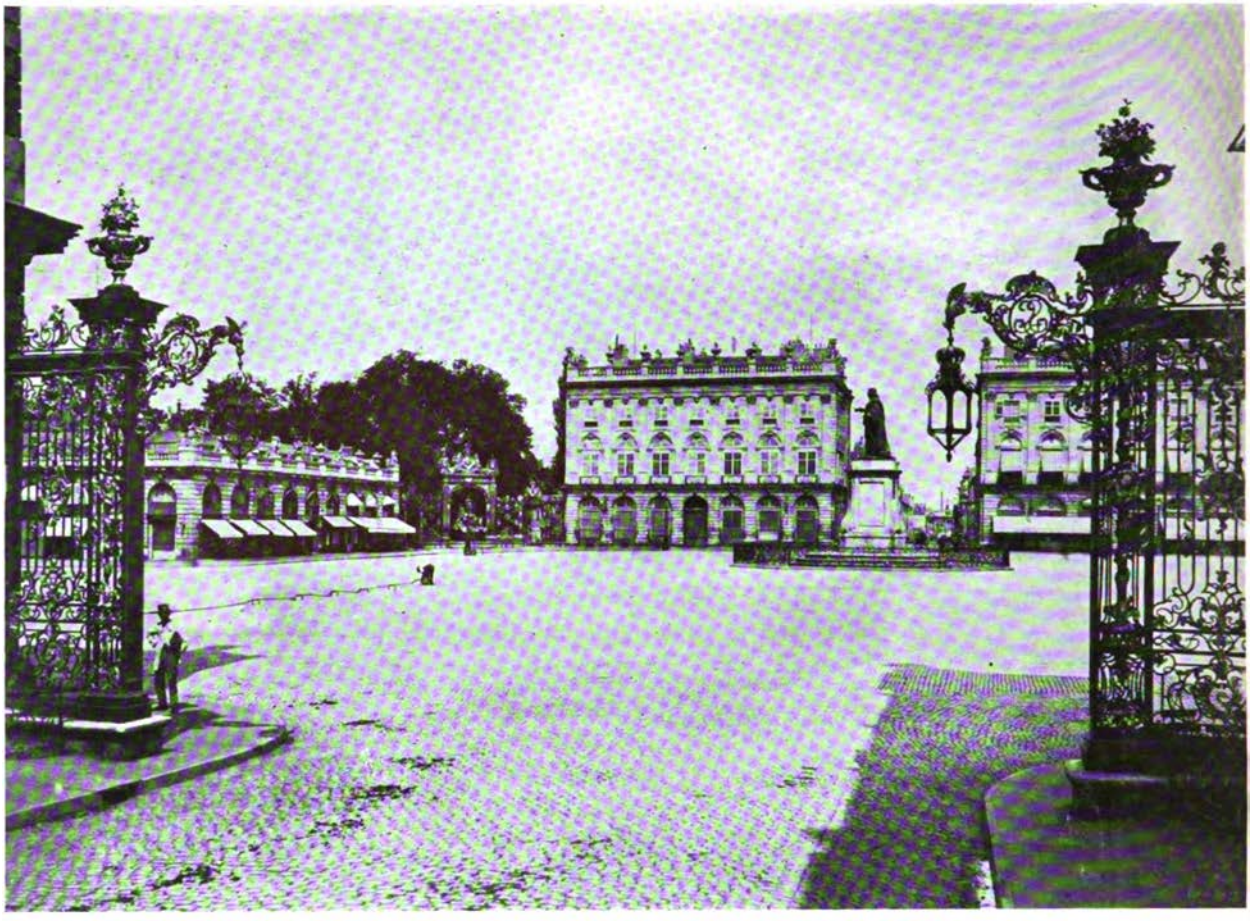


NANCY—PANORAMA FROM L'HÔTEL DE VILLE



NANCY—L'HÔTEL DE VILLE

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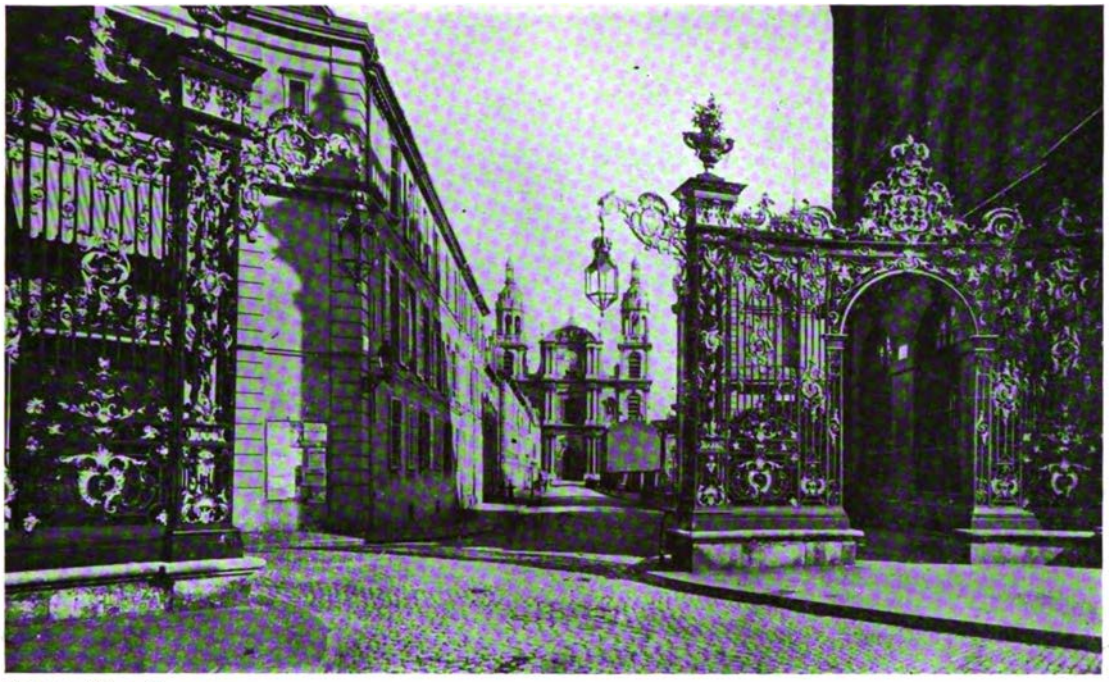
NANCY—PLACE STANISLAS

ings, not only would this effect have been lost but the triumphal arch would have lacked the rightful emphasis which its position near the lower buildings gives it. There is great skill too in the arrangement of the beautiful curved iron grilles, the work of Jean Lamour, of Nancy, across the angles of the *place,* thus uniting it all.

The whole of the vast Hôtel de Ville is not devoted to official purposes, and a few of the first floor rooms are given over to a collection of pictures. It is for the most part a typical provincial collection, but here and there is a picture of outstanding interest, such as a Passion by Lucas van Leyden with its crowds of small busy figures and its mass of incident, or *Christ ejecting the money lenders,* by Jean Van-Hemssen, which shows the painter rejoicing in his recently acquired skill in perspective displayed in the foreshortened faces of the sprawling merchants, or *The Abduction of Helen,* by a master of the German school, with its vivid foreground of activity, the grey middle ground of harbored ships, and the blue back ground of sea and hills, the whole ranged round a center temple with strange architectural embellishments. Then there is the large collection of caricatures by Grandville, a native of Nancy, of the early nineteenth century. But apart from these attractions what perhaps makes a visit to the collection particularly worth while is that to reach it one must pass up the very beautiful staircase with its immense unbroken sweep of string carrying an exquisite balustrade of Jean Lamour.

Nancy is a town of open squares. Another of the largest is the Place Carnot, leading from which is the long Cour Léopold, which, like the smaller Place de la Carrière, is lined with trees and carpeted with grass of the brightest green and which with its neat little eighteenth century houses seems in some odd way to be a kind of French version of Kew Green. One of the most beautiful of the smaller squares is the Place d' Alliance also designed by Héré at the command of Stanislas, this time to commemorate the alliance of Louis XV and Maria Thérèse. It, too, has its double row of planes and is surrounded by small houses. But it has about it now an air of exquisite faded elegance: a kind of autumn bloom has fallen upon it as it stands back entirely secluded not far from the opulent Place Stanislas. By far the largest open space in the town

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NANCY—THE CATHEDRAL



NANCY—PLACE STANISLAS

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NANCY—PORTE NOTRE DAME DES CHAMPS

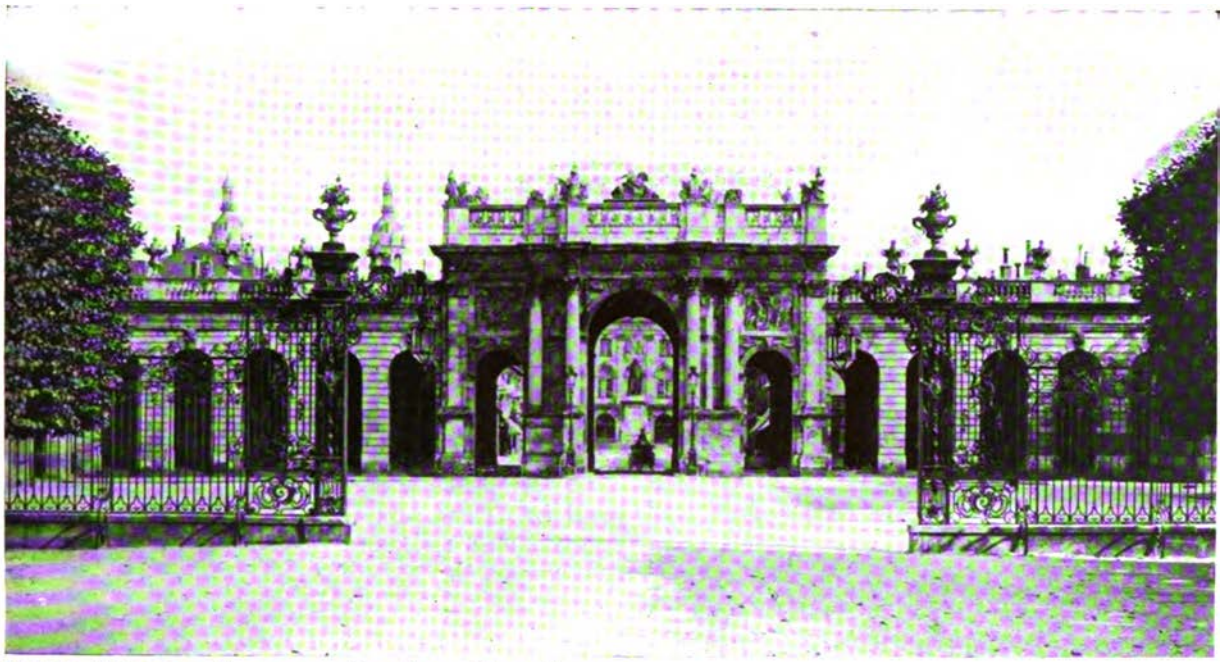
is Promenade de la Pépinière, a large garden laid out with a charming formality of paths and ornate geometrical flower beds, and containing an unusually fine collection of trees. The Pépinière, too, forms part of the general scheme of Stanislas.

Of the other churches, those of St. Sébastien and Notre Dame de Bonsecours are interesting. St. Sébastien, the work of Jean Nicolas Jennesson, is situated in the market which surges up to its very portals. It has a curved front with large ornate stone panels between the pilasters. The interior is unsatisfactory for there is a vaulted roof carried on large columns without any entablature. Notre Dame de Bonsecours is an early work of Héré. It is aisleless and this fact impairs the proportions of the west front which appears narrow and restricted. As a central composition, however, it would have been extremely successful. Within the church there is a kind of German voluptuousness about the sedan-chair-like pulpit, the absurd fragments of broken pediments looking like unequally expanded concertinas. And the chancel resembles some eighteenth century stage set for a tableau, with its sheets of metal painted to represent hanging proscenium curtains and its insipid figure of the Virgin flooded with light from an invisible source. Even the confessionals are an orgy of rococo ornament, amusing enough but certainly unsuitable. Bonsecours contains the tombs of Stanislas and his wife Catherine and also the heart of their daughter, Marie, Queen of France. It is still the object of a constant pilgrimage.

An important contributory factor to the delight of Nancy is the number of arches and gateways. We have already referred to the triumphal arch which connects the Place Stanislas with the Place de la Carrière. This is the finest of the eighteenth century arches, of which the others were mostly designed by Mique towards the end of the century, but some of the old gateways are very beautiful. Many of them have been refaced from time to time as the city's fortifications have been strengthened, so that one passes, as it were, through a succession of arches which have been deposited against one another making one deep continuous tunnel. From their position can be traced out the old city boundaries.

The third and final deposit of the town of Nancy lies mostly to the west of the railway and includes here

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NANCY—VIEW FROM PLACE DE LA CARRIÈRE TO PLACE STANISLAS



NANCY—PORTE DÉSILLES

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NANCY—PORTE DE LA CRAFFE

and there examples of the French *art nouveau* which ill assorts with the eighteenth century urbanity, but, for the most part, it is immeasurably superior to our English town developments of a similar period. A continuous tradition is clearly traceable which, in a country that steadfastly refused to be devastated by the industrial revolution, is not perhaps so surprising.

The visitor to Nancy, however earnest his intentions, must not fail, since gustatory delights do not interfere with architectural appreciation, to taste the light clear beer, with a color and flavor almost as delicate as sherry, and the famous Nancy macaroons. This is best done leisurely in one of the big clean cafes in the Place Stanislas gazing out towards the sedate beauty of the Hôtel de Ville flanked with the gold-picked wrought-iron gates. And if he be fortunate he may see the delights of some provincial wedding, with all its clumsy pomp of ancient landaus and bowing groomsmen, arrive at the *mairie* for the civil marriage ceremony.

H. J. BIRNSTINGL.

EDITOR'S NOTE: This is the third article in the series of Planned Cities. The first of these—Bath, England, by Robert Atkinson—appeared in the JOURNAL for March, 1923. The second—Edinburgh, by Thomas Adams—appeared in the JOURNAL for January, 1924. Additional articles are in preparation and will appear at intervals in the near future. The first of these will probably deal with Bordeaux.

From Foreign Shores

Again as to Environment

EIGHT weeks ago this very day I sat in this same bay window arranging and labeling (I hope not libeling) my offerings from foreign parts. But how different is the external aspect! The warm spring zephyrs are not stirring the filmy curtains and the windows are closed against a cold rain, which, although now more gentle, swept violently down from the north and east all through the night. The church goers are not in evidence upon the drenched sidewalks—they may be in the numerous auto-cars and taxicabs which pound by incessantly leaving wakes of splash and spray upon the surface of the pavement, and storming with sad, monotonous, pulsing noises the air above. Yet even as I write a mellow glow suffuses the dripping atmosphere and the sun promises to break through and assert its wholesome authority in behalf of spiritual cheer and physical comfort. So that, after all, should aught of pleasantness tint my words I may not be able to attribute the quality absolutely to my own genial personality and equable temperament; although should the chill and drear atmospheric condition hold I shall give it the credit, or discredit, for whatever of severity or of a carping nature characterizes my thought.

The Changing World

There is, in that section of the British architectural press which comes to my table, sufficient to give one pause to cogitate upon changing times involving, as they most surely do, a changing, or already changed, attitude of the organized architectural profession toward architecture as a profession and as an art—and these as affected by organization. The ever-changing times! The yielding and impotent say (though in the face of circumstances we all are more or less impotent) "My times are in Thy hand"; but there are brave hearts who do not yield gracefully, who do not accept the decrees of Providence, or of Fate, or of whatever you will, as other than man's decrees and who go down, if they, indeed, do go down, still Captains of their Soul, still Masters of their Fate.

Now, I am not giving any final dictum on all or on any one of the points at issue; but experience and conditions have forced me to think much upon the matters involved in the recent joint action of the Council of the Royal Institute of British Architects and of the Society of Architects, as reported in the British architectural press—notably in the *Architects' Journal,* of London, in many of its recent weekly issues. Up, out of the mass, project two peaks on which we may focus our attention: Regis-

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SOUTHPORT WAR MEMORIAL *From the "Architects' Journal"*

GRAYSON AND BARNISH, FF.R.I.B.A., AND A. L. MCMILLAN, A.R.I.B.A., *Joint Architects*
H. TYSON SMITH, *Sculptor*

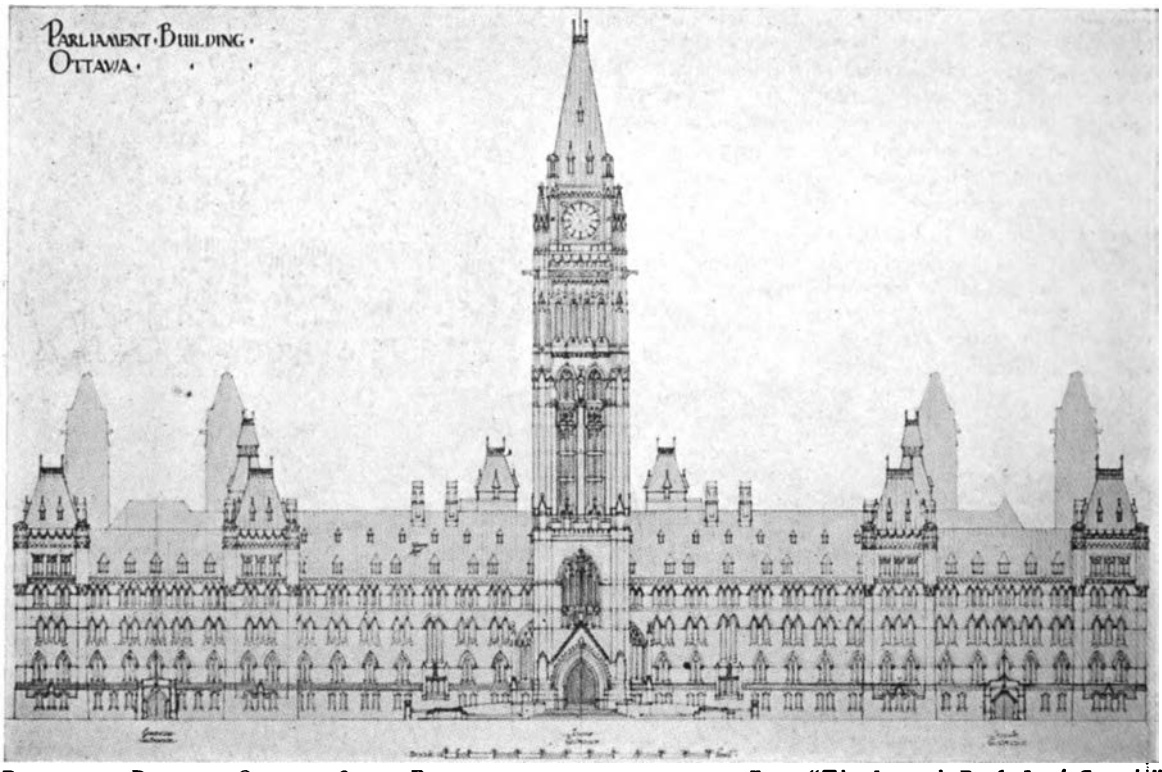
tration and Institutes. Up behind and beyond both of these looms a loftier peak—the Art of architecture; so remote it is however, and diaphanous, that the fleshly eye, fixed on the lesser peaks, discerns, seemingly, neither it nor its portent. All these peaks are to be viewed from a base called Education, and the Art peak from a base called Culture. This latter base is almost as remote and diaphanous as is the peak itself; consequently Institutes and organizations generally do not utilize it. In the process of evolution Art arose above the mists first; Institutes next and Registration last of all—so in contemplating them we shall view Registration first as the newest and least important factor.

Registration—Why?

In favor of a registration of architects only two reasons can be advanced. First, protection of the public; which is valid—only it can be better accomplished in another way if the public really wishes to be protected (from itself); and second, protection of the profession (and its corollary, the inevitable restriction of all practice to the members of a legally self-limited profession) which is invalid; and especially so if architecture involves an art and is not purely a trade.

As to number one: The public can protect itself individually by employing only such men as have a recognized ethical and professional standing, as, say, a Fellow or an Associate of the R. I. B. A., or, perhaps, a member in good standing in any one of the Allied Societies or in the Society of Architects. This under existing laws and conditions. If the public is too indolent or indifferent to ascertain the facts as to the architect it proposes to employ it can be protected against itself by a law which provides that no structure shall be erected from any plans which do not conform to a building code setting forth minimum requirements as to structure, safety, and sanitation. Such a law could easily be enforced and administered in so compact a community as is Great Britain. (Such a law ought to be in force throughout the entire United States.) I am not discussing details now; I am discussing principles. Here is where the gleam from the iridescent peak of Art illumines the path. Art—Beauty—and the power to produce it cannot be taught in schools nor imparted by instruction. It is a gift from the Gods to be developed by the individual in the exercise of his powers. Those powers do not reside in everyone who passes the School or Institute examinations in structure and design. But the public should be given the right and the opportunity to profit from the exercise of such powers wherever they may be found to exist. From whatever source the plan may come—Tom, Dick, Harry; plumber, blacksmith, amateur; or even architect—a per-

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PARLIAMENT BUILDING, OTTAWA—SOUTH ELEVATION *From "The Journal, R. A. I. of Canada"*

JOHN A. PEARSON (DARLING & PEARSON), *Architect.* J. O. MARCHAND, *Associate.*

mit should be issued to a conforming plan which could be materialized into a beautiful, safe, and economical building; and so the public would be protected while art and advancement would not be stifled.

As to number two: If the profession of architecture is so vital to society it can well protect itself by showing itself sane and broad and generous in all its dealings with society and with its own membership. If the appellation "Architect" is sacred, it is not so in itself, but because architects as a profession and individually, and mostly the latter, have rendered distinct service to society; and the profession can be sufficiently protected, as a profession and individually, by inducing society to permit only such individuals as may have qualified in a prescribed manner to prefix the term "Registered" or "Chartered" or "Licensed" to the general title Architect.

And now as to the second peak—Institutes.

What Is an Institute—And Why

Architecture, probably produced by architects—as it was architecture—has existed throughout the ages the greatest expression of the culture and civilization of the time, and this without the external assistance of technical schools, institutes, or legal stimulants. In fairly modern times its practice seemed to fall in evil ways; therefore certain altruistic members of the "profession" banded together, not for political purposes, nor to control legislation, nor to direct education along certain hard and fast technical lines, but to raise a standard of practice, to establish fellowship and each to aid the other in holding high the torch of progress. Those deemed worthy of such fellowship were called Fellows when later they established the Institute. Those who had not yet reached the high estate, but bade fair to, were admitted as Associates —Associates of the Institute which was composed of the Fellows whose real purpose was to elevate a standard which all who wished might follow; not necessarily as Fellows or Associates of an Institute, but as members of a profession. This was done not to raise a profession, but to enhance the value of the service the individual could render to society in his professional capacity.

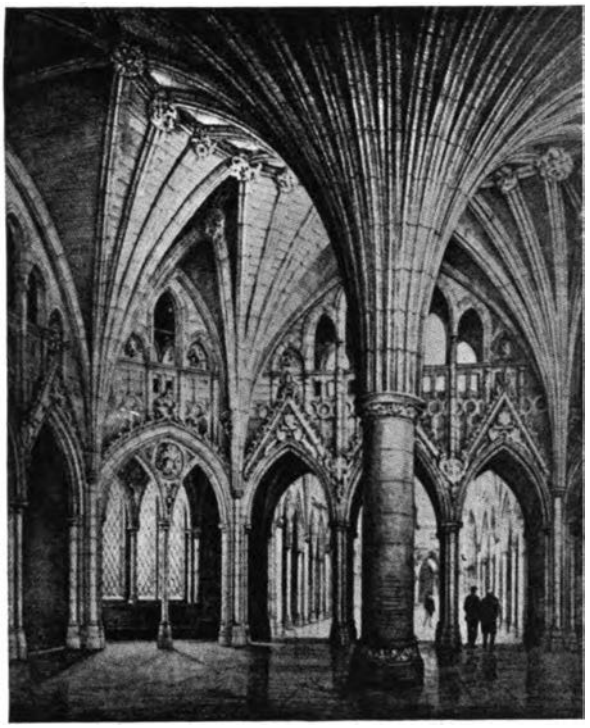
And now to be explicit. During all the years of its existence up to within a few months the R. I. B. A. has been content to be a leader—and it has been the standard bearer—the leader of the profession at home and abroad and in a most enviable position. Forty years ago a small coterie of the Institute thirsting for power, shall I say? for such limitation of the profession as might be accomplished through state registration, being unable to move the Institute, broke away and formed the Society of Architects and became quite a force in the architectural life of the community. But they could not put over a National Registration Bill while the Institute itself was lukewarm or opposed. There must be *Unity* among the profession in the matter before Parliament would consider the project. There were those within the Institute who felt that they were losing prestige while members of other societies, including the Society of Architects, were gaining; that the public was beginning to be unable to distinguish between the two principal societies or was divided in its allegiance. Thus the matter of Registration came before the Institute again and there arose within

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the Institute a body sufficiently large to elect a council committed to the proposition. But Parliament would not listen to two bodies even though they wanted the same thing, and that thing was ostensibly the "Protection of the Public!" Parliament wanted *Unity* in the profession. And so we have the situation as it is before us today. The Institute has relinquished the ideal of leadership in behalf of that of Power and Domination. Here is the first clause in the R. I. B. A. Council's statement:

(1) As a Council we declined, in the interests of the R. I. B. A., to consider a registration policy which does not leave the R. I. B. A. *supreme as the registration authority.* (The italics are mine—I. K. P.)

Will a Parliament step aside, relinquish its prerogatives, and turn the public over to the tender mercies of a professional body, no matter how altruistic may have been



From "The Journal, R. A. I. of Canada"

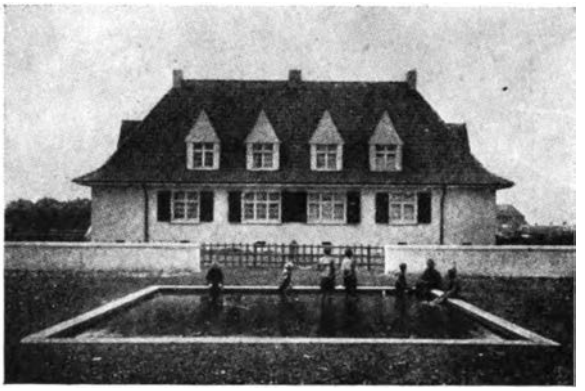
PARLIAMENT BUILDINGS, OTTAWA—CONFEDERATION HALL
JOHN A. PEARSON (DARLING & PEARSON), *Architect*
J. O. MARCHAND, *Associate*

the acts and ideals of that body in the past? That is for Parliament to answer, not for me. But I know what my answer would be; and the reader can guess from what I have said above as regards registration.

The Society wants a hand in the pie—the exercise of power—and is willing to be swallowed up (or its Council is) to procure it; for clause 11 says:

The Council of the Society of Architects could not see their way to support an R. I. B. A. Bill on these terms, but offered to consider the dissolution of their Society and the absorption of their members by the R. I. B. A. as an alternative.

The Council of the R. I. B. A. wishes to be returned



From "Deutsche Bauhütte"

PART OF A HOUSING GROUP IN HAMM, WESTPHALIA
ALFRED FISCHER, *Architect*

to office on this platform and as the election occurs some time in June it may or may not have been returned before this is in print. I therefore feel free to express myself although the members of the organizations involved were asked not to criticize the scheme or raise embarrassing questions!

A Newcomer

Number one, of volume one, of the *Journal, Royal Architectural Institute of Canada,* is on the table before me. It is a quarterly, attractive in form and make-up. It looks quite homey, having, as it does, a "Secretary's Page," a "Structural Service Department," and news from the chapters called "Reports on Activities of Provincial Associations." In this issue are reproduced photographs and drawings of the New Parliament House in Ottawa, of which John A. Pearson, of Darling & Pearson, is the Architect, with J. O. Marchand, Associate. There is presented also a good portrait of Frank Darling, LL.D., R.A.I.C., R.C.A., F.R.I.B.A., Gold Medalist, R.I.B.A., 1915, who died on 19 May of last year.

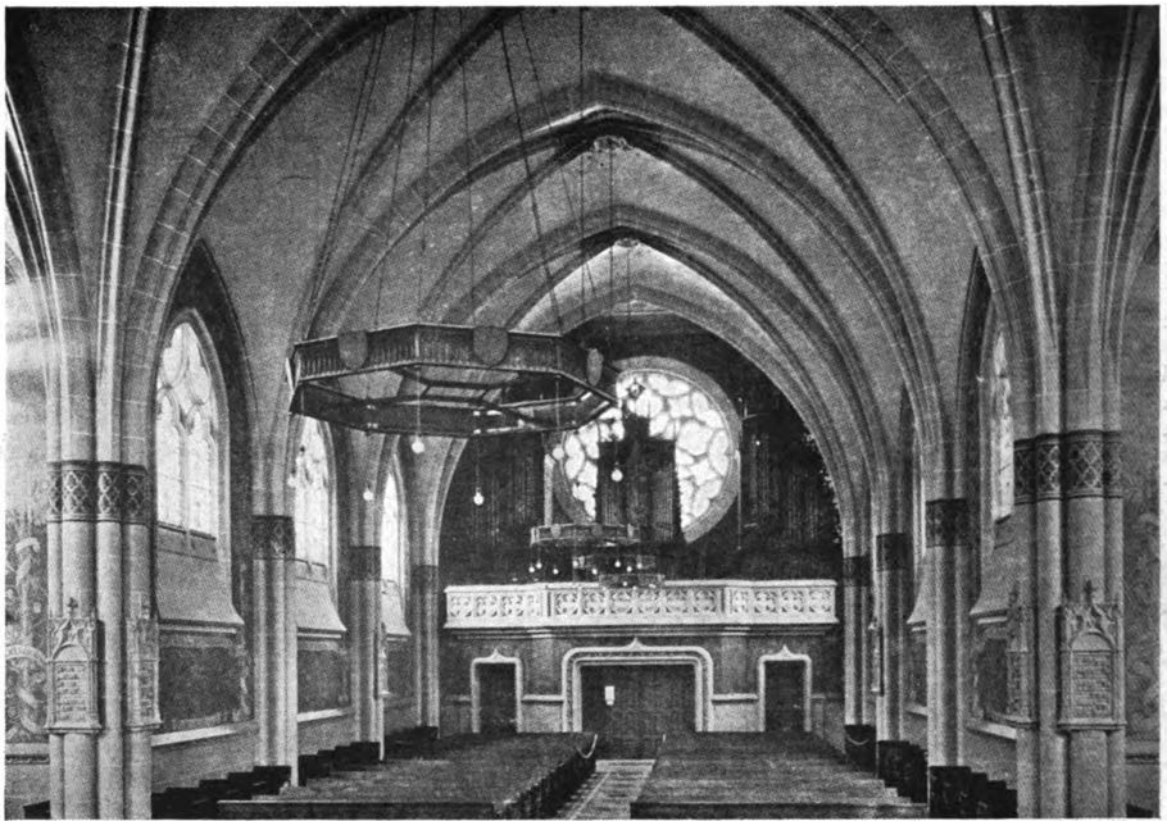
Construction, of Toronto, Canada, gives a still more elaborate presentation of the Parliament Buildings in its May issue, which is a very attractive number. In the April issue is an article, interestingly illustrated, on the



From "Deutsche Bauhütte"

PART OF A HOUSING GROUP IN HAMM, WESTPHALIA
ALFRED FISCHER, *Architect*

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PROTESTANT CHURCH OF RHEIMS
CH. LETROSNE, *Architect*

From "L'Architecture"

rehabilitation of certain slum districts in Philadelphia. The illustrations show the patient before and after taking. The *Journals of the R. I. B. A.* are, as usual, replete with interesting literary material.

There is fairly little in the way of illustrations in these present offerings to attract comment. There is little that is either good enough or bad enough to warrant the critic in holding up the one for emulation or presenting the other as a horrible example. Some of the German periodicals, as for instance, *Deutsche Bauhütte* of Hanover, illustrate some well planned and designed working men's homes in connection with an industrial town, a well considered plan of which is also presented. We reproduce two or three illustrations.

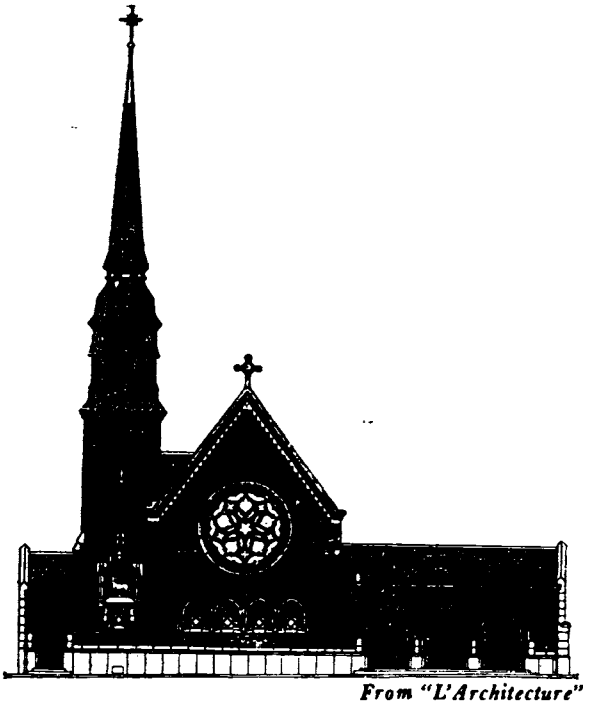
Architekten, Copenhagen, illustrates in the 30 April issue, Broadway, New York, at night. Underneath are some lines which I do not understand; but I know that had I written them I would have said things not very complimentary to American taste.

Architecture, London, for May, contains much good reading matter, in which is an article A. by Trystan Edwards on Public Criticism of Architecture, and a series of Book Reviews by Lionel B. Budden, Institute gold medal essayist of a year ago. The editorial in the April number of this same Journal makes one wonder at the provincialism of Londoners, assuming, of course, that the writer knew nothing of the use of the lift, we call it elevator, in creating and maintaining values in upper stories; that is, knew nothing of the subject until "Bush House" was built and furnished as an example. Bush House, Aldwych, is nine stories in height and all about it are existing nine-story buildings by English architects. Do they make the Britishers walk to the top as in the Paris apartments for the middle class which I have commented upon in these columns? The British writers are bound to make this particular "Bush House" one or all of the seven wonders of the world—although Mr. Edwards, in the article referred to, expresses a fear that the completed building will knock St. Paul's off the map. (My words—his sentiment.)

As for public criticism of architecture—or private either for that matter—it is impossible; that is: true valid criticism is impossible today because of a lack of standards; because of a non-appreciation of principles; of a non-comprehension of fundamentals. We liken buildings to the body and speak of clothing the skeleton. Now the difference between the building and the body is that in animals the skeleton cannot stand without the functioning muscles and ligaments of the body; and in the building, the clothing or cloaking material cannot stand without the firm, braced skeleton. The skeleton structure is not called upon to show through in a building any more than it is in a body. But there is no logic, and certainly there can be no beauty, in dressing up a horse's skeleton in a man's or a lion's muscular cloak and calling it a man or a lion, as we do when we dress up the plan and structure

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FROM FOREIGN SHORES



From "L'Architecture"

PROTESTANT CHURCH OF RHEIMS—ELEVATION
CH. LETROSNE, *Architect*

of a bank in the forms of a Greek temple and call it a bank. It is not a bank—or what a bank should be; it is a vulgarized Greek temple. And anything vulgarized is bad art. We must have understanding of fundamentals before we can criticize art; and the art is all there is about buildings for us to criticize.

A paragraph from Charles Marriott's reflections upon modern English architecture is quoted with approval by the Editor of the *Architects' Journal,* London, of 9 April, as to commercial architecture: "Speaking generally, the shops which serve some single, confessed, and definite human need, butcher's, baker's, and green-grocer's, are better than the department stores and big drapery



A GERMAN FARMHOUSE *From "Deutsche Bauhütte"*

establishments which trade upon human credulity and exploit the desires rather than the needs of silly women." I rather enjoyed that paragraph myself—and then I began to wonder, as touching art, just where need left off and desire began; just where that vague line of demarcation was to be drawn between need and desire in the fields of art—of literature—of religion! We shall have to get down to fundamentals before we can speak with certainty in these matters. Next time I want to speak more fully of this affair of art as well, perhaps, as of economic matters touching upon such things as Architects' and Surveyors' Assistants' Professional Unions and their direct representations on the Council of the R. I. B. A. The R. I. B. A. can force this by becoming a closed shop itself; and it can become a closed shop by adopting a certain attitude toward registration.

IRVING K. POND.

Speaking of Precedent

SPEAKING of Precedent versus Originality, a subject most ably treated in our last Annual Convention, it perhaps seems absurd to add one jot or one tittle to what was said, but was the subject ended with that discussion? Will it ever be ended?

We heard five remarkable papers on the subject. It is curious to remark that the only one supporting precedent was Mr. Cram's.

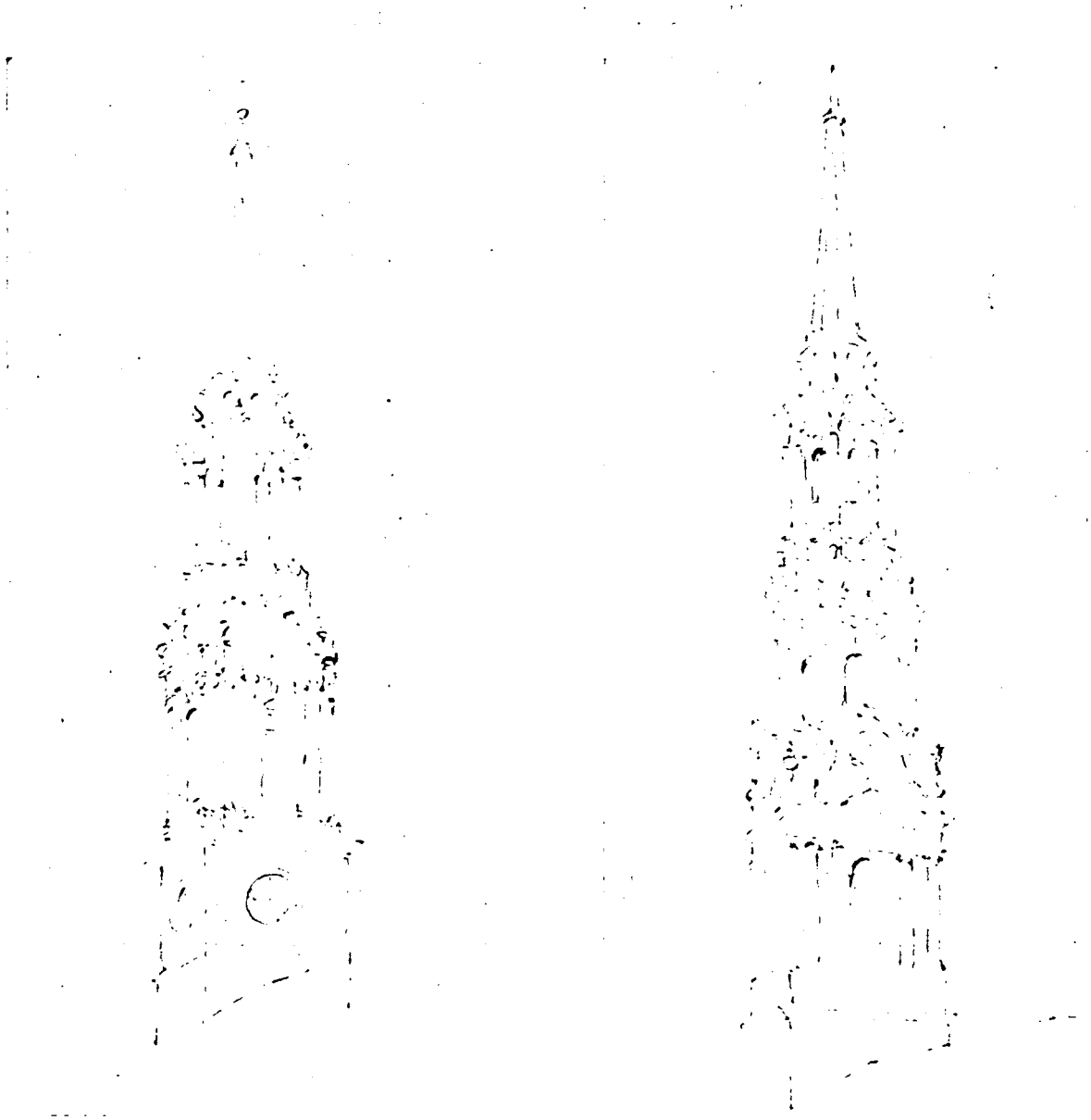
Now just what is originality; just what do we mean by originality? Taken in its extreme sense, originality means freedom from influence, especially influence of other men's ideas. A pure product of self and self-interpretation, a child of an individual brain. I say this is the extreme end or minus infinity of our subject as opposed to a pure copy, if such could be made, placed at a plus infinity. Between these two extremes lies the entire course of architectural design.

Let us see what minus infinity means in its fullest sense. It must mean any object created free from the influence of any outside force other than the objective itself, under the creative influence only of the creator's brain.

How can such a minus infinity be imagined? Let us say we take a child born of artistic and cultured parents, put it in the care of the most ignorant of guardians, bring it up, we will say, to an age of self realization, in a flat prairie plane, in a tent, and never allow it to see anything in form of human make. At the end of this period give it a pencil and paper and tell it to design a cathedral, even to a written description of the space on the ground a seat must occupy, and a description of its chancel requirements, in words only. Of course it must know some means of measuring. What would be the result? Absolute originality, but I am sure, in fact certain, the result would not fulfill our ideas of at least a proper solution of the problem.

Now let us take our plus infinity. What is a copy? A copy in its fullest extent is an exact reproduction, a Ford machine made to gauges, a 16-in. shell made with the minutest micrometers under the full supervision of the

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ST. MARTIN'S IN THE FIELDS, LONDON

ST. PAUL'S, NEW YORK CITY

FIGURE 1

Bureau of Standards. But is this possible of a building? I think we will all agree that it is not. Then what stands for our zero or middle path? Surely it is this middle path that American Architecture must follow.

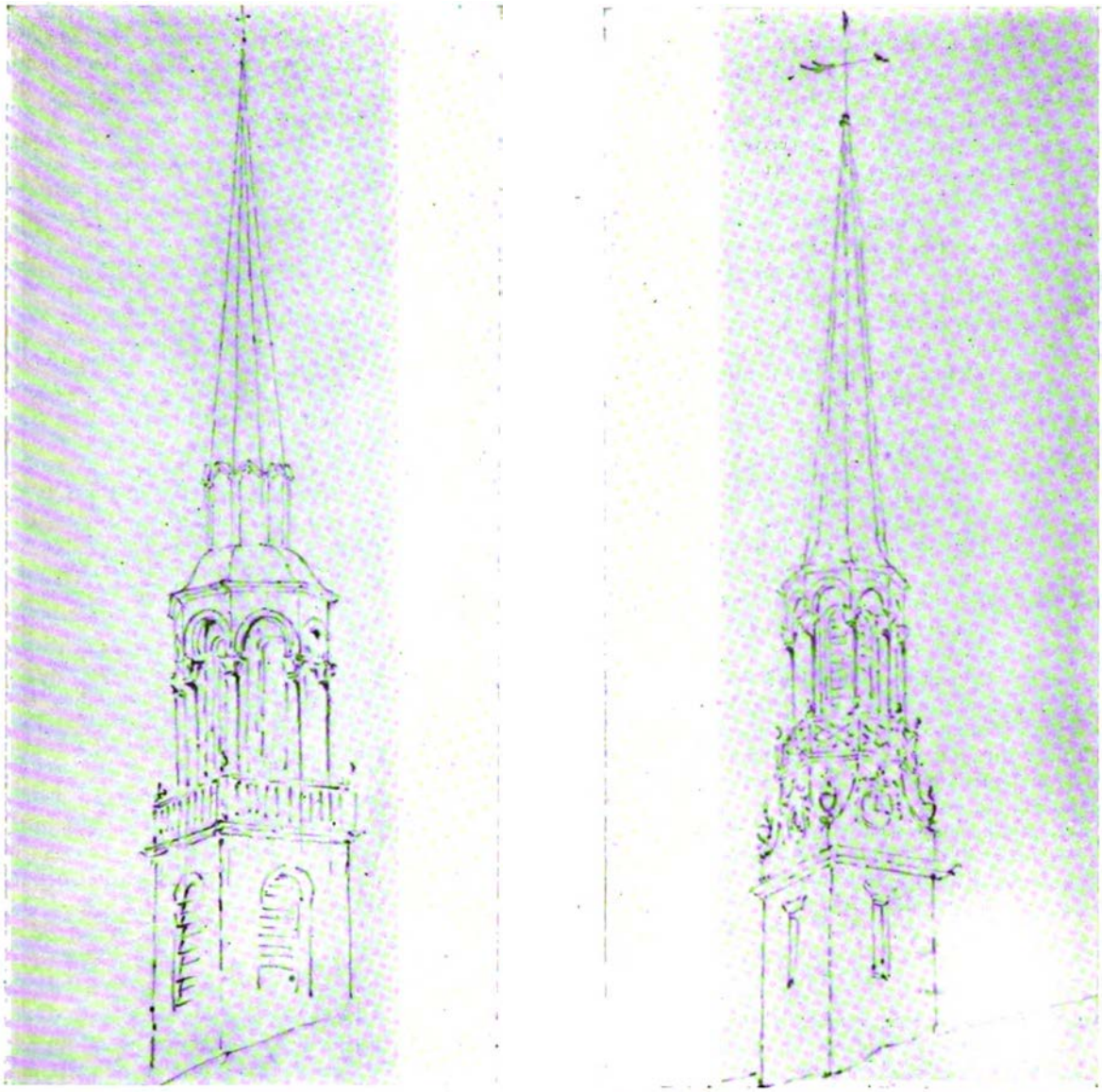
Again, let us take an example or parallel to Mr. Magonigle's idea of originality. We look into a mirror and recognize our face. We say, "I am John Smith," or "Tom Jones," "but is my face original? Is not my face composed of two eyes, a nose and a mouth at the bottom, flanked on either side by projecting ears, and roofed with hair?" Study it closer. You say, "I have the eyes of my father, the hair of my mother," and you hear the remark, "Doesn't he look at times like his Aunt Jane?" Yet my face is essentially masculine and we would resent any statement that said we were not ourselves.

But our Creator did not use the originality at his command. Suppose we decided to change the nose to a corble in the center of our foreheads on which to support our hats, and the ears likewise so designed. Using a little more originality in the design, we would place an eye on the four sides of the head because the eye can take in only ninety degrees, and again in order to eat soup more readily, the natural place for the mouth would be at the top of the head, with a sound reflector to broadcast our voice. The rest of the face or head quite naturally follows with a graceful volute into our necks, and we have immediately produced an original design.

More than likely our arms are not perfect. Four would be better than two, and wheels on the soles of our feet would add to our means of locomotion.

We could change the design to agree with the many

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OLD SOUTH CHURCH, BOSTON "A"

FIRST PRESBYTERIAN CHURCH, FAYETTEVILLE, N. C. "B"

FIGURE 2

styles by simple application of the details, and a change of line. Rhythm would no doubt play a great part.

"What nonsense!" someone says. Yes. I agree with you. *I* am the product of generations. *I* go back perhaps millions of years. *I* have been produced through countless ages of evolution. Under the guidance of our Almighty Creator, the Great Sculptor, *I* have been a handful of clay moulded, pressed, urged this way and that by a Loving Hand, always present, always near. Each generation has under Almighty Guidance and Care added to my personality, my powers to think, act, do, until today *I* am *I*, and *I* shall proceed through countless ages to improve, grow greater, more complex, higher in type, until my Creator in his infinite wisdom says "stop," and there will be an end to all that we now know and recognize. Am *I* original? I think not. Am *I* a copy? I think not. *I* am *I* by the grace of God.

In the Minutes of the Institute about 1868 there appears the statement that St. Paul's is a copy of St. Martin's in the Fields, and that the New York City Hall is a copy of the Capitol at Rome. Look at the illustration closely. Are they copies? Similar, I admit, but are they copies? This is Figure 1.

The writer just finished a church which is reproduced in Figure No. 2. "A" is the Old South Church in Boston. "B" had its inception in "A" with changes dictated by personal taste and a desire to meet existing conditions. Are they alike?

Given a different locality, different exposure, different climate, different materials, different workmen, is it pos-

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sible to make a really true copy? Seldom can it be done.

Then what should be our course?

First we should study mass proportion, scale, relations of mass to voids, and so on. Then we should study all styles, first superficially, learning how other generations have solved their problem, irrespective of style as a decorative feature. Then we should study style, all styles, intimately, in detail, as we would learn our words in language, and learn to apply them intelligently.

Here we are, a free country, with no architectural precedent of our own. We should draw freely from the great wells of Architecture of the past.

We will then go forward, creating out of a mass of infinite resources a new style of Architecture, truly American, truly of our century, but it must be borne in mind that if we are to produce a French essay we must use the French words, and if we are to produce a Christian edifice we must use the Christian motives, holding closely to precedent lest our composition speak a polyglot language and our meaning fail to be grasped by our audience.

In our discussion of adaptation, I think no architect should be discouraged. Study of former times, study of architectural styles, history, literature, poetry, painting, sculpture and drama, all contribute to the breadth of an architect's vision.

What makes a building interesting? You will be told it is the correct use of mass, proportion, scale, balance, and so on. Is it not possible that we unconsciously inherit from former generations the gift of appreciation of the beautiful, and consciously or unconsciously grope back in the contemplation of a new building for the history and historic sources or ancestors that shine through its beauty? Do we not see through the eyes of our forebears, the stretching back of history and ancestry? I am convinced that we long for a reflection of that which typified our homes centuries ago, not alone because we individually admire them, but because there has been born in us an unconscious recollection of the homes in which *we* dwelt in the preceding centuries.

Surely mass, proportion, scale, balance, exposure, climate, color, grades, selection or adoption of style, and the many other requirements which are the dictates of any problem, will give us all the necessary freedom to exercise our ingenuity and originality.

Still another point. There is one point at which American Architecture falls down. Most of us are trained to think first of the plan and then of the elevation. We are not trained to think in three dimensions at once. There is no doubt that the great architects of the Gothic period did think in three dimensions simultaneously. The very fact that a design for such great cathedrals as Amiens started at the top and worked down instead of the usual way of working up is to my mind one of the causes of superiority of their designing, and taught them to think along broader lines than we do today.

Still, there is seen here and there an awakening, a spark, which foretells of an American Architecture. When our cities look upon their development logically, when they realize their streets are limited in capacity, that the owner of each lot is entitled to light and air, when real estate owners awake to the realization that building on the maximum area of a lot is not the economical use of land or buildings, when architects become so unselfish as to take into account the neighbors when they design new structures, there will be sufficient requirements laid down and in fact greater freedom of mass and form, out of which will spring an Architecture greater than we have yet realized, or has ever been realized.

HOBART UPJOHN.

Paris Letter

THE increased cost of material and of labor, in France as everywhere, as we have already said, has perceptibly slackened the rate of construction activities. Among buildings intended for business and industry no crisis has come to pass. For financial reasons, many companies have enlarged their business premises, the expenditures thus effected reducing the amount of income eaten up by taxation and at the same time giving them much better production and office facilities.

In buildings intended for human habitation, a reactionary movement may be discerned, in two clearly distinct phases: on one hand the large houses or groups of houses containing from 20 to 100 apartments and sold by apartments; on the other hand, fine one-family houses, and private mansions. In general, the latter are being built in Paris itself, and are designed by architects. As for the one-family houses, for the most part constructed in the suburbs of Paris (up to ten or a dozen kilomètres from the city) many are being erected by speculators, in very cheap fashion, and despite that, with a labored refinement in their decoration (at least upon the street façade) which evidences with a remarkable clarity the deficiencies—in taste and æsthetic education—of their builders and owners. Our greatest hope is that nothing will remain of these excrescences in fifty years' time.

Aside from this private work, the municipalities have made great efforts to assure the building interests sufficient activity to employ available men and material. We have already related the story of the low-rent housing program of the City of Paris. The construction of new schools is being carried on without interruption, and among the older schools which can be altered, electricity and central heating are little by little being installed.

Concurrent with these operations, another program of public shower-baths and swimming pools has been elaborated and put in hand. But even before these "little oceans" have been filled with water, terrible tempests have stirred them, and the architects of these edifices have had to exert true courage in supporting these outbursts in silence.

The story is well worth telling: for it will interest our American confrères and I can well imagine that public mentality is very nearly the same everywhere. But in order to understand properly the acuteness of these incidents, the American reader must first fix firmly in mind the thought that in France many people who have passed

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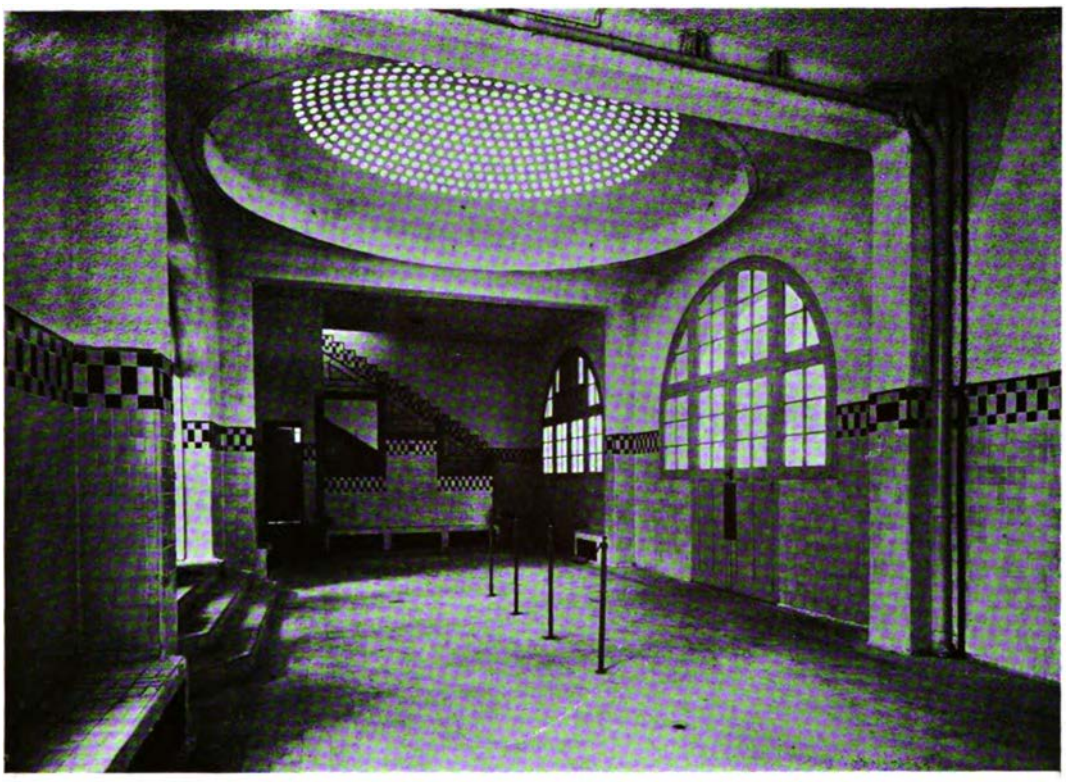


FIGURE 1—ENTRANCE HALL, MUNICIPAL SWIMMING POOL, PARIS

forty look upon a swimming pool as an establishment *de luxe*. But others, and especially all the younger generation which unhesitatingly makes its wants known to the municipalities, demand these pools as a necessity. So the Administration of the Prefecture de la Seine, acting in accord with the Conseil Municipal of Paris, has worked out a comprehensive program for the erection of bathing establishments in various quarters of the city, to relieve the load upon three or four municipal pools already obsolescent; and in addition for the construction of a Nautical Stadium intended for the swimming races of the Eighth Olympic Games. It is this latter edifice which has given rise to violent incidents, and the ink already spilled in discussing the proposal might easily have filled its capacious basin to the brim!

So that all would be ready in good time, plans and estimates were required from the architect in an extraordinarily short time, the execution of the work was ordered without delay, and today the Stadium is all but complete: such rapidity deserves only praise. But the press—*la grande Presse!*—informed the public one fine day that the Stadium was going to cost several millions of francs above what had been originally estimated.

So many millions, thought the public, simply for sinking a hole in the ground! for so the vulgar imagination thinks a pool is constructed. It was added that the excess in expenses was due to the shortsightedness of the architect, who moreover (it was hinted) had an interest in increasing costs in order to swell his fees. I fear me this state of mind concerning the honorariums received by architects obtains in all countries. It is the most unhappy insinuation which can be made against us. All architects worthy of the name, from the very day they choose their career, have renounced the usual gains of business in order to act in a truly professional capacity and in recompense they receive the gravest injuries.

These insinuations came to the ears of the Conseil Municipal of Paris, and there, in a confused discussion, the Prefect of the Seine, the Government's representative, insufficiently informed, was not able to defend his architect's services with all the efficacy desirable, and was forced to agree that the architect be brought before a disciplinary council (composed of functionaries elected by their peers) to look into the matter. I hasten to state that M. Bévière—for that is the name of our very distinguished confrère—has received notification that the council has already decided that there was no ground for action against him. We are convinced that our confrère will receive a more glowing compensation on the day the Nautical Stadium is opened.

But today architects have evinced great satisfaction in attending the inauguration of the first new bathing establishment, the work of M. Louis Bonnier, an architect and city planner known throughout the world, whose talent has not ceased to increase with time and who, now past his sixtieth birthday, seems to belong, by his art, to enthusiastic youth, in all new things.

The general plan of this establishment is extremely simple. A large vestibule (Fig. 1); to the left, a space reserved for those who merely require showerbaths; at the right, dressing rooms for swimmers (Fig. 5), which includes 300 lockers. In the center, the swimming pool

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FIGURE 2 —THE BASIN, MUNICIPAL SWIMMING POOL, PARIS



FIGURE 3—BASEMENT, MUNICIPAL SWIMMING POOL, PARIS



FIGURE 4—BASEMENT, MUNICIPAL SWIMMING POOL, PARIS

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FIGURE 5—DRESSING ROOMS FOR BATHERS, MUNICIPAL SWIMMING POOL, PARIS

itself—a covered pool, for it must be used the year round for bathing at a comfortable temperature.

To pass from the dressing rooms to the swimming pool, the bathers must traverse a shower room where they are required to wash themselves before entering the pool. The basin is built along the lines of the latest improvements. It is a completely isolated member—one can circle it beneath and around the sides to verify this. Figs. 3 and 4 show the arrangement of the basement. The separation of the pool from the rest of the structure is complete, and even the platform on which the swimmers walk about the pool does not touch the basin, which is thus free to contract and expand without regard to any other factor. The hall, built entirely of reinforced cement, is of happy proportions. Fig. 2 illustrates it better than I can describe it.

Thanks to this construction there will be no dripping from the condensation occurring on the painted surfaces. Moreover, above the platform, stands a false roof likewise built of reinforced cement, and providing complete ventilation, as shown in Figure 2.

At about the height of the average man, throughout the establishment, the walls are covered with white faience, with borders of blue, green or brown—and their arrangement has been studied with the greatest care to obtain a good effect with a minimum of expense. The hot air, in most of the rooms, enters at the sides of the benches, all of which are of cement.

There is an interesting fact about the water—which rises from an artesian well sunk at the same spot as the establishment. This water, taken from a great depth, reaches the surface of the ground at a temperature almost right for the baths. Its flow is sufficient to renew the water in the basin completely every ten hours. The necessary additional heat is imparted by steam-heaters, capable of heating the entire supply of water in case the flow from the well is interrupted. The bottom of the pool is paved in dark blue, with three white lines laid its entire length, as guides to swimmers in races which may some day be held here. The pool is 33.33 metres in length, which enables the swimmer to cover 100 metres with but two turns. Its depth runs from .75 metre at one end to 2.75 metres at the other, but the water-level can be raised for races another .25 metre. An amusing idea has been executed in this pool: portholes containing electric lights have been placed at intervals along the bottom of the pool, following the white lines mentioned before, for gatherings in the evening. By daylight the water, through which one can see the blue and white bottom, takes on tints which recall those of the Mediterranean along the Côte d'Azur. But the usual run of the clientele of this establishment will scarce enjoy the opportunity of comparing this illusion with the reality, for the quarter in which it is erected is one of the poorest of all Paris. These baths are not free; a franc and a half is the usual entry fee. However, one day a week, the admission is doubled, and so great is the lack of similar establishments in Paris that many well-to-do people come on this special day. It is hoped by this means to defray a part of the not inconsiderable costs of construction and amortisation. The building complete represents an outlay of some 4½ million francs. But such expenditures are not to be regretted for such a purpose.

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To reply to opponents who cry out at such prodigality when this swimming pool is mentioned, I have adopted a set reply: "One swimming-pool saves a hospital." I have at hand no statistics which would honestly allow me to be more assertive than that, but generally my antagonist goes away satisfied, and at the first opportunity repeats the phrase to someone else. When it has made its way throughout France—possibly then I will no longer be here—all our countrymen will then admit that the swimming pool is a necessity, and not a sumptuous architectural luxury.

G. F. Sebille.

The Secretary's Page

33. The 57th Convention is a matter of history. Yet, although many things have been written about it the Secretary cannot refrain from mentioning two or three little things which appealed very strongly to him. Firstly, the luncheon at which there was a Secretaries' Table. A paper was passed about on which the different secretaries present wrote their names. When we counted the names afterwards there were just thirty. Pretty good, says the Secretary. The big regret was that the noise and confusion of the room was such that no discussion could be carried on.

34. Then the luncheon whereat the delegates divided themselves up by regions and sat about together. One Regional Director stole a march on the others and had a short, well-attended and enthusiastic meeting just before the luncheon, and held it at the Octagon, the home of the Institute, where they laid out their plans for the year to come and settled on the place for the next real Regional Conference. While they were prompt, the Sixth Region beat them to it for they had already made their arrangements for a Fall meeting. Due announcements of place and location will come later from the proper parties.

The Secretary hopes that both of these incidents of the Convention will develop into regular parts of the program. These were conceived in haste and put over as best they could, but with proper time to allow for them much may be done. Look out for 1925.

35. The Bureau of Standards. It ought to be a name to conjure with. What a delightful visit, perforce all too short, and what a fitting close to a memorable Convention! But the visit opened the eyes of the Secretary to the fact that almost nothing is known about this Bureau of Standards. Like the vast rank and file of the people of the United States, a large proportion of the profession is evidently quite unaware of what the Bureau of Standards is and what it is doing. Many asked the Secretary the question, "What is this Bureau of Standards and what does it do?" He could only answer "Go on in and see." And then the Secretary put on Hans Andersen's "Fortune's Overshoes" and wished himself into the thoughts of one of those several who did not know of the Bureau of Standards. Instantly there he was, and this is what he saw, to his unbounded amazement and delight. Into a room or two in one building, then out to another, then down hill to a third, then about the place to various small buildings and contrivances, into other large buildings, big rooms, little rooms, machinery of all sorts, always passing by interesting looking places one couldn't stop to investigate, and at certain places polite well-informed gentlemen who in a few words gave you a vision of what was being accomplished in that small place.

The Balance Room. A balance that will weigh to one part in a hundred million—we weren't allowed to see the one that weighs to one part in a billion—arranged so it can be operated from across the room so the heat from the body won't cause an error, and where a difference of a few inches in height can be detected in the weight. And we were told that all the standards of the States are checked here with the National standards and these in turn checked internationally at the International Bureau of Weights and Measures near Paris. Hardly dared to breathe.

Elevator Interlock Tester. A machine working away all by itself giving elevator interlocks a life test. It opens and shuts the door and starts and stops the car. It tries to open the door when the car isn't there, and tries to start the car with the door open. And then it records accurately all failures of the mechanism. Think of it!

Hinge Tester. And right across the room a little door on hinges, the hinges loaded as they would be in actual use, and a motor opening and shutting the door and counting the number of times it does so. And this little machine showed that some types of hinges would outlast others, such as are in ordinary use, well, 40 times as long. What is a year's guaranty?

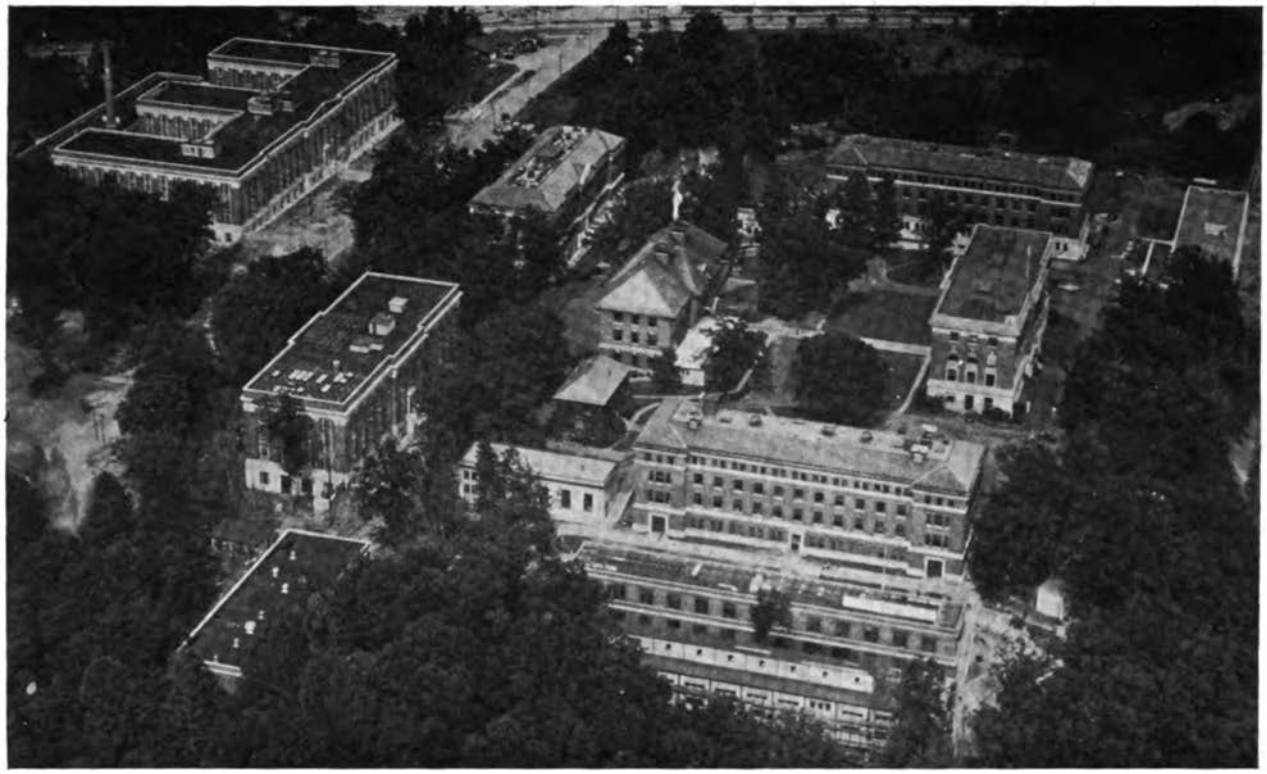
Sound Chamber. Here they have manufactured a "scientific noise," and with it are measuring sound transmission through panels of different types of building materials. If I had only known that before!

Stucco Tests. Here the durability of stucco and the effects of the different variables in stucco making are being tested by building panels on a special building. Panels are left in place for several years, then examined and removed. Expert workmanship seems to be of greater importance than most features of the specifications. I have always felt that to be so.

Wind Tunnel. Three wind tunnels, the largest 10 feet in diameter, and able to produce a wind of 75 miles an hour velocity. This is out-of-doors. Planning to test wind resistance of buildings, and have tested roof ventilators; it is invaluable in all aircraft designing. What next?

Fire Test House. A nice little house which they fill up with condemned furniture and papers and give a life-size imitation of a real fire under different occu-

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THE BUREAU OF STANDARDS, WASHINGTON, D. C., FROM THE AIR

pancies. They can observe the progress of the fire and get exact records of the temperatures. Bill will be sore because he missed all this.

AN INFERNO FOR SAFES. Another little test house just north of the other. This has a real furnace which will heat a safe red hot and keep it there as long as wanted. Then they throw the safe down three stories into a ravine behind and see what happens. I rather think this will prove whether a safe will preserve its contents in legible condition when a wooden floor is burned from under it and it drops into a basement. What?

CEMENT TESTING LABORATORY. Here they test all kinds of cement, concrete and stone, and can also test the manufacturing process. The Bureau of Standards tests all the cement bought by the government, and has branch laboratories for this purpose all over the country. Glad I'm an architect.

PANEL FURNACE. Here are panels of actual walls, big ones, so set up that a steady fire of any desired temperature can be maintained against one side of the wall and the true fire resistance of the wall accurately measured. In all these fire tests they use thermo-couples which give the actual temperatures at different depths within the walls. I expect the fire insurance people are watching this work.

OPTICAL GLASS. And here we find them making optical glass, and it is beautiful material too, as fine as any made in the world, and from materials found in the United States. Up to 1914, when the War began, the art of making optical glass was unknown in this country. This optical glass is made in machine-cast clay pots which hold about 1,000 pounds each. Some pots! They cook it for about a day, stirring constantly, at a temperature of 1500° centigrade, then cool it down and break the pot and there remains the solid lump of glass, just like a piece of the most perfect ice you ever saw—into lumps the size of the lenses or prisms to be made, inspected, moulded, ground and polished. What don't they do at the Bureau?

TESTING MACHINES. And then we entered an enormous room with big machines in it, wonderful threaded screws of colossal size, motors, glorified jacks. One of these is vertical and can exert a crushing capacity of 10,000,000 pounds; another with a capacity of 600,000 pounds, equipped to exert bending force or to test very long light structures, such as air ship girders; and a long horizontal machine capable of exerting a compressive force of 2,300,000 pounds (greater than the weight of the Twentieth Century Limited) and a tensile force of half as much. With these machines they can test the strength of all kinds of masonry construction, columns, girders, almost anything which can be constructed. My head is getting dizzy with figures.

WEATHERING TESTS OF BUILDING MATERIALS. Here they are speeding up the processes of nature. Specimens of stone, brick, tile, terra cotta, what you will, are tried out by two processes. In one they cook it and freeze it and thaw it and freeze it and soak it, and so on. In the other, which is quicker than the freezing method, they soak the specimen in a solution of calcium sulphate and allow it to dry. This is a very severe test and duplicates

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a form of failure often observed in buildings where moisture charged with mineral salts can seep to the surface and evaporate there. I could have avoided trouble on that building if I had only known this.

CERAMICS. Here they can produce ceramic materials and have been studying glazes for terra cotta and the like. Weathering tests, studies of effects of expansion, and so on *ad infinitum*. Oh me! Oh my!

WINDOW GLASS. And they are studying window and plate glass: such things as measuring the pressure required to burst glass of different thicknesses, and assistance in preparing window glass specifications.

FIRE TESTS OF ROOFING MATERIALS. Tests going on to find out the relative fire resistance of different kinds of materials.

Just at this minute, with a thoroughly dazed mind, the Secretary stepped into a mud puddle and Fortune's Overshoes came off, and he found himself standing on the outside of one of the buildings with a party of delegates waiting for the bus to come and take them on to Arlington. And then came the idea that he would try to give a little picture of what he saw, and then the query as to how all this work could be used, and how the information could be made available to those who wanted it. A note is appended telling anyone interested how to go about getting such information.

36. The Secretary claims this 57th Convention was one of the best. He regrets one thing very much, and that was the enforced absence of the Secretary of Commerce, Mr. Hoover, because of illness, and also that of the Director of the Bureau, Dr. Burgess, out of town on urgent business. The Secretary is happy to know that Mr. Hoover's indisposition was but a brief one. He wishes to extend to the Department of Commerce and to the Bureau the thanks of all those who were so fortunate as to make the delightful trip of inspection.

NOTE: The equipment of the Bureau of Standards laboratories is probably the finest in the world for investigational work. It is housed in 14 permanent and several temporary buildings located on a 35 acre tract of land a short distance beyond the more thickly populated portion of the City of Washington. It is easily reached by the Chevy Chase car line or by automobile along Connecticut Avenue.

The Bureau is required by law to carry out tests or investigations requested by the National or State Governments without charge. In the case of private individuals, certain investigations are undertaken the results of which would seem to be of benefit to the public, the Bureau reserving the right to use the data thus obtained as it sees fit. Some routine testing is likewise done for private individuals and manufacturers where no commercial laboratory is fitted to perform the work. In these cases nominal fees are charged for testing which are turned in to the Treasury Department.

Results of the Bureau's investigations and researches are made available to the public through its publications. These comprise five series entitled: Scientific Papers, Technologic Papers, Circulars, Miscellaneous Publications, and Handbooks. They may be bought from the Superintendent of Documents, Government Printing Office, Washington, D. C. Circular 24 of the Bureau of Standards with its supplements comprises a list of all the publications issued by the Bureau to date. Those interested in scientific work in general will find this circular useful for reference purposes. Others desiring lists of the Bureau's publications along specific lines may obtain mimeographed lists of this sort from the Information Section of the Bureau. A great many of the reports are briefed in the Structural Service Department of THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS.

EDWIN H. BROWN.

A Reconstruction of the Basilica of Constantine in the Roman Forum*

NORTH APSE

Contemporary with the construction of the entrance on the Via Sacra was the addition of the apse at the north. That this is not part of the original structure is shown by the absence of bonding into the wall, and by the fact that the edges of the openings which originally pierced the rear wall of the central bay, can still be traced in the brick-work which was cut through when the apse was built. As the lines of these openings run to the floor we must conclude that at some period in the construction three doors were planned to open into the central bay at the north from the street which bounded the basilica on this side. This would have necessitated some adaptation to the steep grade of the street. The apse is not a true semicircle, but a segment on a chord 57 feet long. Possibly the objection to blocking the street at the rear prevented the construction of a true semi-circular apse, though the flattened type occurs occasionally in other buildings such as the large hemicycles of the forum of Trajan. The basilica-like structure found at Ostia was planned to have two hemicycles in adjacent walls[67].

At the entrance to the north apse, on the line of the original rear wall, a marble threshold is still in place. This shows spaces for the plinths of two columns which divided the entrance into three parts.[68] A cutting in the sills between the places for columns shows that the tribunal was separated from the hall by a screen, probably of marble.[69] The portions of cipollino shafts lying

* The two preceding parts of this article appeared in the JOURNAL for February and April, 1924, respectively.

[67] Not. Scavi, 1916, pgs. 405-408.

[68] Rivoira, Arch. Rom. p. 202 cites similar decorations in the basilica of Atricoli.

[69] Middleton, Op. Cit. of marble; Ashby, mss. of Top. Dictionary, bronze.

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FIGURE 11—NORTH FROM THE EXTERIOR (KINDNESS OF SENATOR LANCIANI)

at the southeast of the basilica are of suitable size to have stood at the entrance to the apse. The ends of the wall into which the apse cuts were finished with pilasters. A capital of proper dimensions and base are lying nearby. (Figure 12.)

The position of the architrave which the columns and pilasters carried is shown by breaks in the wall ends at the height of the top of the columns.

Three blocks of a marble architrave sculptured with mouldings on both sides and therefore planned to stand free are lying against the north wall. These are of the dimensions required for the architrave over the columns at the entrance to the apse. Two of these architrave blocks were separate from the blocks of the frieze. The third is in one piece with the frieze block which is, however, cut back for the insertion of the sculptured slabs. A portion of one of the latter has been found and affixed to the wall. (Figure 13.)

The workmanship is crude but spirited. It is carved with a putto in a garland and with a palmette. Nibby[70] pointed out that this is similar in design to the decoration of the porphyry sarcophagus of Santa Costanza now in the Vatican. We have also a portion of the cornice which modern excavators have set up as a part of the entablature. That the various sections of the entablature were cut differently according to the size of the blocks available is the case not only here but also in the entablature which rested on columns along the rear wall of the apse. Architrave and frieze are cut in single blocks in some sections, in two in others. One is pieced along a diagonal break from top to bottom. The ancient clamps show that this break is not due to a fall from the wall. We have placed statues above the entrance, one over each column, a frequent Roman practice.

The marble blocks of the architrave and the column fragment show various cuttings. The large architrave blocks have rectangular cuttings in the centers of the ends. These probably served for the insertion of metal to which chains could be attached for hoisting or in which tongs could catch. The smaller pieces show lewis holes undercut on both sides. The clamps were of the hook variety; the dowels of the pour-channel type. Pry holes of the ordinary type were cut in the top surfaces of the stone courses to pry the stone above into position. The sizes of all these cuttings vary according to the uses for which the blocks were intended.

No description of the pavement of the apse is given by the early excavators. A close examination of the concrete bedding at the original floor level furnishes a clue to the pattern. A disk enclosed by a square occupied the center

[70] Del Foro Romano, p. 206.

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FIGURE 12. PILASTER CAPITAL



FIGURE 13. SLAB OF FRIEZE

of the space. Oblongs adjoined the sides of the square with smaller squares enclosing circles at the four corners. There are no definite traces to the right of this central design. To the left the space was divided into squares and rectangles in the largest of which there was a circle. Possibly the smaller units were also subdivided by the insertion of circles or diamond shaped slabs.

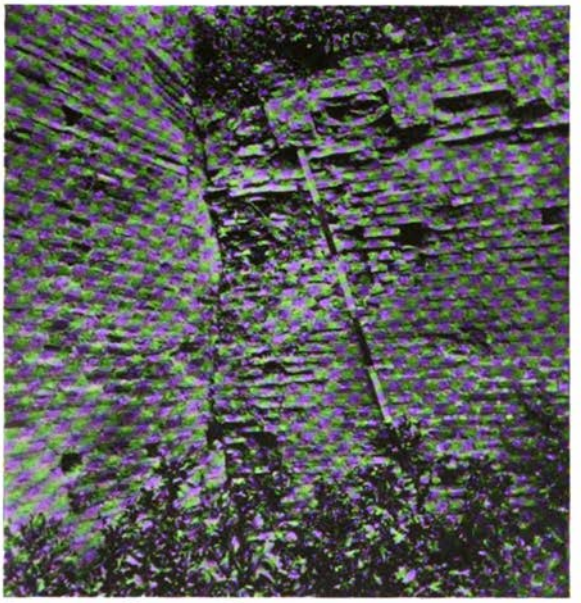


FIGURE 14. TUNNEL (KINDNESS OF SENATOR LANCIANI)

Around the wall of the apse ran a platform two steps above the floor level. There are a few small fragments of the serpentine veneer of the wall of the apse in place above the platform which served as a base for the judges' seats. In our restoration we have placed marble chairs here. The spaces between the brackets which adorn the wall are each three times the average width of ancient thrones. The pedestal-like construction in the center could not have been a dais for the prætor's seat as is generally assumed, since the brackets at the sides are too close to the platform to have allowed for the construction of a stairway which would have been required to make the top of the platform accessible. The curving wall at the front of the platform is part of the original construction which probably supported a statue in the large niche in the center of the wall. We have assumed that the movable currule chair[71] of the prætor was placed on a lower platform which projected in front of the curved wall. The present platform with the smooth thick slab of marble embedded in the concrete and the others which cover it was probably modified to this form to serve as an altar when a chapel was constructed in this part of the basilica in the Middle Ages.

The sockets on either side of the top of the larger central niche probably contained brackets which supported statues. Originally there were an arched niche of nine

[71] Abbott, Rom. Pol. Inst., p. 343.

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feet in the center and two tiers of niches, five feet high, in the wall, probably containing statues, somewhat on the principle of the exedrae of the Forum of Augustus. Between the lower niches were small Ionic columns of cipollino resting on brackets. Many of the shafts and capitals are still available. The brackets which were found have been re-set. They are carved with putti or victories and garlands. There are palmettes at the sides. The columns supported an architrave, all of the blocks of which were found in the excavations. Five small windows, filled in at a later period but clearly traceable in the brick facing above the higher niches, gave light to the apse.[72] We have fitted these with bronze screens.

Stairway at Northwest

In the north pier of the west wall, a small door between the first two niches from the nave gave access to a circular staircase. This continued directly to the roof of the nave where it turned as did the corresponding stair at the east. The falling of the upper section of this stairway makes it available for only 52 steps. It is lighted by small splayed windows in line at regular intervals on the outside of the wall. The broken section of masonry lying on the floor of the Forum of Peace shows how the transition from the spiral to the straight stair of the buttress was managed. There were no similar stairs in the south piers of the building as is sometimes stated.

On either side of the west apse a small door led out from the central hall; that at the right opened on an exterior staircase to the street level, the door at the left communicated with the subsidiary rooms, which are to be described.

Use of Remains of Earlier Horrea-Rooms at the West

Since the main hall of the basilica did not extend along the Via Sacra as far as the oblique street to the Carinae, the triangle space bounded by these streets and the end wall of the basilica as far as the apse (see ground plan) was utilized for the construction of small rooms, reached from the main hall, and probably used to keep the records of the court which met in the basilica. The floor level of the hall is more than 19 feet above that of the warehouses which formerly occupied this part of the site, so that cellars were left under the rooms and were probably accessible from them by a temporary wooden stair. The cellars may also have opened directly on the side street. The rooms above the cellar were one story high, and seen from the Via Sacra, balanced the single story narthex at the other end of the main hall. The extended front wall concealed the outline of the lower part of the apse from the street.[73] A large arched window in the front wall, now visible from the inside of the wall but blocked along the Via Sacra, gave light to the room. The cellars may have had windows at the side.

The brick walls of the warehouses of the Severi can be traced in the embedded small rooms of the construction of Maxentius. He thickened the earlier front wall by building on both sides of it, filling in part the space between the piers which were wider than the connecting walls. The end wall of the basilica is built against older transverse walls. This wall shows by the bondings that it was modified after its original construction. Two walls parallel to the Via Sacra, which divided the rooms of the warehouses into rows, exist in part, so that it is probable that the same divisions were retained in the cellar of the small rooms of the basilica. We have assumed that the upper room was also divided. The outer wall of the smaller room ran straight back from the front wall to the depth of two of the rooms of the warehouses, then diagonally joined the wall of the cellar of the apse at what had been the rear corner of the fourth row of earlier rooms, which was shorter than the two front lines of rooms along the Via Sacra.

The wall which formed the rear of the fourth row of rooms is partly built into the cellar wall of the apse.[74] This cellar was entered directly from the street and did not communicate with the cellars of the other rooms. The door is outside the end wall of these rooms. It is part of the original structure for the arch, while the use of *bipedales* (large flat bricks) as voussoirs proves its Roman origin. The pavement is of tile.[75] The roof rests on two piers of the earlier buildings, which were strengthened with an additional thick enclosing coat of concrete. The space between these two piers is roofed with a short barrel vault intersecting another which forms the outer portion of the ceiling. This circumambient vault is wider at the rear of the apse than at the sides, [76] giving an elliptical section parallel to the main axis and a semi-circular section at right angles to the main axis. A flat wall closes the cellar along the diameter of the apse. The vaulting was constructed on a wood centering over which a thatch was placed before the concrete was poured, as may be seen by the marks of reeds still plainly visible on the under surface.[77]

The originally small doorway at the right of the apse from within the building, at the level of the floor, was later filled in, but it can be traced on both sides of the wall. We have restored this as opening on a flight of steps leading to the level of the side street. At this point a tile pavement fills the angle between apse and wall, though partly concealed by later debris.[78]

Tunnels

Since the west portion of the north wall of the basilica came close to the wall of the Forum of Peace, the street to the Carinae was entirely blocked. To obviate this, a tunnel (Figure 14) was built in the substructures of the basilica at the northwest and a gigantic buttress constructed to carry the superincumbent corner. Structural arches to relieve the weight of the superstructures

[72] These were recognized by Desgodetz, op. cit., p. 107.

[73] In the early Christian basilicas of North Africa the apses are sometimes flanked by square sacristies so that the side walls of the buildings form a continuous straight line. Gauckler, Basiliques Chrétiennes, pgs. 8 and 10.

[74] Senator Lanciani has kindly shown me a drawing made at the time of the excavations, when this could be seen.

[75] Not. Scav., 1879, pgs. 312-313.

[76] This shows an adaptation of the circular barrel vault springing from a central pier which roofs the basement of the tomb on the estate of the Cordians near the Torre degli Schiavi, and the chamber under the Heroön of Romulus near the Circus on the Via Appia.

[77] This was noticed by Middleton, Remains I, p. 67; Ashby, P. B. S. 1, pgs. 158, 9; Lugli, Bull. Comm., 1915, pgs. 160-164.

[78] Not. Scav., 1879, l.c.

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are visible in the wall over the entrance from the street to the Carinae and also at both sides of the rear wall of the basilica under the windows of the northwest bay. These structural arches as well as the close and well-fitted bricks of the arch which roofs the tunnel, show that it is part of the original construction.[79] The tunnel is about 12 feet wide, 50 feet long[80] and 20 feet high. It has the same level as the Maxentian cross-street. The lower courses of the walls are formed of blocks of travertine. Those at the entrance project inwards from the wall. They are joined together very unevenly and were probably covered by an original ornamental framework for the entrance, or they may have served to keep wagons away from the walls. The hub marks at the right where the block projects further, are less deep than those at the left. The floor is paved with tiles, some of which bear the inscription OFF SRFOCEN.[81] This level was original, but it could not have been kept for a long period as the lowest line of hub marks is 44 inches from the ground. This would have been made by wheels eight feet high if they passed on the level of the tiles. A second line of marks is 27 inches above the first. The floor is level, so that the slope to the north at this point must have been negligible. The road along the north of the basilica was, however, steep, as its level at the west, at the exit of the tunnel, is 22 feet below that of the road which meets it from the Via Sacra at the east; the rise is more than 7%.

Material

The construction of the basilica represents the greatest daring in ancient Roman times in the use of brick and concrete,[82] although the facing lacks the finish of the earlier periods. Irregularities in the thickness of the walls were trued up by the mortar coating which served as a backing for the marble veneer. The concrete core of the foundations has a rubble of selce and refuse material. In the walls broken brick, laid in irregular rows, are used. The rubble of the vaults shows a large proportion of lighter pumice.

There is also a quantity of marble, charred brick and even bits of wood in the concrete. We have not been able to find any traces of jars in use in the available portions, although Rivoira says that they were employed in the basilica.[83] The mortar is characterized by fine lumps of red pozzolana and fairly good white lime. The facing of the walls consists of bricks of various types.[84] Many of those found have the stamps of Domitian. Broken tile bricks of the period of Severus are also frequent. The general color of the bricks is a dull red with a conspicuous admixture of bright orange and clear lemon yellow bricks of the time of Aurelian. The yellow bricks are generally only about six inches wide. The height of the bricks varies from one and three-eighths to one and five-eighths inches. The length rarely exceeds a foot. The horizontal joints are wider than the bricks themselves in some cases and very irregular. The vertical joints are somewhat narrower. Bonding courses of thick yellow tiles occur at an average distance of 56 inches.[85]

Method of Construction

The line of the barrel vaults is behind the walls between the bays: the projecting portions of the piers behind the columns thus afford stability in case of earthquakes.[86] The Sessorium, in ruins near Santa Croce, a slightly earlier building, was so unstable that Constantine had to add buttresses to prevent its collapse.[87]

The walls were built with the aid of scaffolding. The holes for the horizontal supports of the successive platforms generally occur above each bonding course, at intervals of nearly five feet, the greatest height that a workman can conveniently reach in laying bricks.[88] As already stated, wood centering was doubtlessly used for the vaults. The bricks were laid on the lines of the groining in double rows with larger bonding tiles at intervals. The space was then filled with rubble. When the man ribs had set, they served to support the centering for the intervening sections.

It has been the fashion to disparage the basilica of Constantine as the characteristic product of a period of decadence. Aside from the fact that it displays the highest technical skill in the use of brick and concrete to which the Romans attained—namely, in the construction of the great groined vaults—the building was not ungraceful. It is true that it does not follow the proportions of length to width (one-third or one-half to one) laid down by Vitruvius. It is clear, however, that the Augustan architect was influenced by the type of basilica consisting of a central hall surrounded by a two-storied colonnade. Crudeness in detail was not noticeable in much of the decoration because of the height above the spectator at which it was placed. The costliness of the marble employed, the gilding and the numerous statues, 57 according to our restoration, contributed to form a magnificent ensemble. The three ruined bays are impressive today as they tower above the Forum, visible from many parts of the city. The proportions of the nave, with its eight huge columns, when viewed from the narthex at the east, could not but have impressed the spectator with its dignity and grandeur. Finally, the structure is of great interest in the history of architecture as practically the last great monument of pagan Rome[89] and the prototype of many of the great churches of Europe.[90]

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[79] Lanciani, Storia Scavi II, p. 218-19; Not. Scav., 1879, pgs. 312, 313.

[80] Measurement of length is given by Thédénat. Tunnel is now inaccessible beyond entrance.

[81] Lanciani's record made at time of excavation. Those near the front are now nearly illegible.

[82] A century later buildings were constructed entirely of brick as S. Giovanni in Ravenna (a. 425) and the Mausoleum of Galla P'acidia (a. 440); Rivoira, Lombardi, Arch. I, p. 22, 28.

[83] Op. cit. p.

[84] In the Circus of Maxentius on the Via Sacra, built in 309, tufa blocks alternating with rows of bricks are used as facing for the first time. This method became general a century later.

[85] Rivoira, Arch. Rom., p. 95, bonding from 8 to 56 course.

[86] Durm, p. 261. Nibby considered it a defect that the arches are not semi-circular.

[87] Rivoira, Arch. Rom., p. 185.

[88] Rivoira, Arch. Rom., p. 111 reproduces a picture from the tomb of Julius Justus on the Via Latina, showing masons at work.

[89] The baths of Constantine on the Quirinal are slightly later.

[90] Rivoira, p. 250, states that Santa Sophia in Constantinople was modelled after the Basilica of Constantine.

(*See Bibliography on next page*)

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Public Information

As the season draws to a close, Public Information activities in many of the Chapters seem to decrease. This ought not to be, as the reading public is just as approachable in the summer as in the winter and in some instances even more so. Business men who have been rushed to death in the winter often find time hanging heavy on their hands either in the deserted city or over the weekends with the family, and they devour the newspaper from title to want-ads.

Chicago reports that it is continuing its publication of articles in the *Chicago Sunday Tribune* and the *Chicago Herald and Examiner.* The papers show willingness to publish this matter and everything sent to them has been set up in type. But the time of publication is sometimes deferred. Paid advertisements govern the quantity of reading matter issued by the paper and as these articles have always been placed in the Real Estate and Building Sections, pictures and descriptions of new buildings have taken precedence over the material contributed by the Chapter.

Indiana has sponsored two lectures on "Elements of Modern Architecture Applied to Commercial Buildings," delivered by Fermor S. Cannon, the Chapter's Secretary, and dealing with the evolution of building, leading up to the zoning laws. Appropriate diagrams were discussed and reproductions of the buildings were displayed. The Chapter feels much encouraged by the result of this work.

New York has been keeping up a steady fire of notices and articles in the local press, sending out an average of eight to ten a week. In some instances, short articles and notices have been written by the Committee. In other cases, they have given the information to a newspaper reporter and he has written the story.

John V. Van Pelt, *Chairman,*
126 East 59th Street,
New York City

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Ups and Downs in the Modern Building[1]

THE MODERN skeleton-frame curtain-wall building had its birth in Chicago so recently as 1884. From that time to the present day, a period at the beginning of which most of us were alive, a revolution in the design and construction of buildings has occurred the like of which is unknown in the history of architecture. Think, if you please, back to those boyhood days when Trinity spire and the old shot tower east of Broadway stood high above the low level roofs of New York. Compare this memory of yesterday with today's towered reality, and you may gain some inkling of the extraordinary change which has taken place in the building industry during the past forty years.

Need I remind you that the modern building and the elevator have grown up together? Of course, this is not only true of the elevator. It is also true of modern sanitation and water supply, of modern methods of heating and ventilation, of the incandescent lamp and modern illumination, of electrical distribution and utilization, of methods of signaling and communication; in short, of all those mechanical and electrical arts which make the modern building work, or, lacking which, the building fails to work. For verily the modern building is no mere housing, it is a machine. Machines which are not economical, efficient and thoroughly adapted to function are either never built, or if built, are soon consigned to the scrap heap. Here is a lesson which, it seems to me, the building industry has yet to learn from the mechanical industries. It is a subject I have already enlarged upon in another place,[2] so I need do no more now than draw your attention to it. Here I wish to touch upon a few aspects of the particular relations of modern elevators to modern buildings.

Of course you know that it is quite useless to erect buildings of any great height unless an adequate and suitable means of vertical transportation is provided. By adequate and suitable I mean that the elevator facilities for such transportation are so arranged, and of such capacity, that the number of people desiring to use the elevators can be moved with safety, with rapidity, and with reasonable comfort.

That the elevator traffic problem is a real one will be evident if I tell you that the total number of passengers carried in one day in the passenger elevators of New York City is more than twice the number of passengers carried the same time in all the horizontal transit facilities of this city combined. Furthermore, the same traffic conditions which determine the capacity and suitability of a subway line also determinine the capacity and suitability of an elevator system. Both are problems in railroading, and precisely as the primary factor affecting the selection of railroad equipment is the traffic and its character, so it is with the selection of elevator equipment.

Only indirectly is the elevator problem a matter of floor area served. Many mistakes have been made by using some rough ratio of square feet rentable area per elevator. It is safe to use such a ratio only for buildings of approximately the same total floor area, approximately the same number of floors and used for the same purpose by the same kind of people. That such a rule-of-thumb method is unsound is easily shown if we consider two buildings having the same total floor area, but in one case spread over, say, five floors, and in the other case divided among 25 floors. I need hardly waste time telling you that the elevator equipment suitable for the one building will be totally inappropriate for the other. This difference will be more marked if we populate one building with bankers and brokers, and populate the other with professional tenants.

The total floor area and its distribution among floors is important only as a means of estimating the total probable population and its distribution. Thus we learn approximately how many people must be handled by the elevators and about where they will want to go. Then, from a study of the general rental situation and its tendency in the district where the building is to be erected, we may get some idea as to the class of tenancy and how it will behave. These last factors are of great importance, for from them it is possible to set up the probable time distribution of traffic. It makes all the difference in the world whether the population largely works by the clock or is more or less casual, whether it stays put, or is constantly coming and going.

It is also necessary to study the future—to decide, or, rather, to guess as intelligently as may be whether the district is developing or changing its character; whether within the next decade the building may fill up with large corporations, or be invaded by the clothing industry.

May I take the time to suggest that you consider the apt statement made by another that "the passenger is the standard automotive package that stacks itself in one tier?" Passenger elevator engineering is but a special case of freight elevator engineering, but in the case of the passenger elevator, some packages, so to speak, come in white paper tied with silk ribbons and others come in gunny sacks tied with jute cord; some are in the class of perishable express, others are slow freight, and all are marked "charges collect."

Thus, from an estimate of the traffic class or class of tenancy, the character of the desirable service may be determined. It is concerned with two questions. First, how long can a passenger be expected to wait for a car. and,

Second, having entered the car, how long can the passenger be expected to remain in it without writing a "raspberry" to the agent just as soon as he reaches his office, or on the morrow after having just missed his train the night before.

This question of service is very important for elevator service gives the impression of the building. I suggest for your consideration the following classification based on interval and on round trip time. The interval is the average time between cars going in one direction at the

[1] An address delivered before a group of real estate operators in New York.

[2] "The Modern Building Is a Machine."—*American Architect*, 30 January, 1924.

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intermediate landings. The round trip time is the average time between the successive departures of any one car from the main or ground floor landing. The interval and round trip time together constitute the time table key—the information which enables us to reach a decision as to whether or not we are willing to commute over the line.

Class	Interval	Round Trip Time
Super Service	Less than 20 sec.	Less than 120 sec.
First Class	20 sec.	120 sec.
Intermediate	25 "	150 "
Low Grade	35 "	180 "
Casual	35 "	210 "

This classification is based on a long statistical study of elevator traffic and its effect on the tenants. I do not think it is exaggerated. Nevertheless you will recognize that comparatively few buildings even attain to intermediate elevator service.

Just as the time between trains determines the number of cars in the train, so does the interval between elevator cars determine the car size and its load. Only a given number of passengers can be loaded and unloaded at the ground floor during the interval time which is the maximum time the car can stand at this floor and still maintain its schedule.

The number of elevators in a bank required to maintain the desirable service is related both to interval and to round trip time. The interval being taken as fixed, the round trip time becomes the variable to be determined. It depends on a number of factors including the travel, number of stops and the velocity characteristics of the equipment selected. It is an interesting and important fact that the number of stops a car containing a given number of passengers will make, can be calculated to a surprising degree of accuracy by the method of probabilities.[3]

Now I think it is obvious that after the average round trip time has been determined by calculation, then dividing this round trip time by the interval gives the number of cars in the bank required to maintain the service. Therefore (and this point I particularly wish to emphasize), when, and by whatever means, the round trip time is reduced by an interval, the desirable service may be maintained by one less car, or, contrariwise, with a given number of cars, the service may be equivalently improved.

This possible reduction in the number of cars is not always advisable. In the first place the necessary added equipment on the remaining cars costs real money. In the second place, the reduction in the number of cars makes a shut-down of one of the remaining cars a more serious matter, for one car out means a considerable reduction in the capacity of the plant. Thirdly, with the fewer cars the importance of maintaining the schedule becomes of greater moment. Fourthly, good service in elevators, like good commuting or transit service, tends to slow down by increased traffic.

However, when we are faced with the problem of buildings having more than 16 floors; several banks of elevators are necessary. This is because a bank of more than 8 cars is not a practical operating arrangement, and often many more than 8 cars are required to handle the traffic. Then, as the travel increases, if the service on the high rise banks is to compare favorably with the service on the low rise banks, less and less floors can be served by the high rise banks.

This requires an inordinate number of cars, unless either service to the upper floors is sacrificed, or the round trip time of such express cars can be decreased. Furthermore, due to the zoning law, the restricted floor area on the upper floors makes this floor area an economic asset to the building only if it be not seriously reduced by elevator hoistways.

How Service Is Accelerated

I think it can be easily shown that where such conditions prevail, it will pay, and generally pay well, to reduce the number of cars in the high rise banks by every means at our disposal. And this, as I have said before, means reducing the round trip time.

There are several possibilities to this end, most of which I have had the opportunity to work out and to apply in several recent installations.

Obviously, increased speed comes first to mind. There is no insuperable mechanical or safety reason why any limitation should be placed on velocity. At this moment we are traveling at the rate of 25 miles a second relatively to the sun and do not realize it. We travel at the rate of 6,000 feet a minute over railroads and calmly eat our dinner or read a newspaper. So far as I can see there is no reasonable likelihood of our ever wanting to travel vertically at anything approaching such velocities. But to put an arbitrary limitation on elevator speed is both unreasonable and unintelligent.

It is not velocity which matters, but how you get up to the velocity and how you come to rest which counts, and this is purely a matter of speed control. With proper control I, myself, and with perfect comfort, have reached velocities in elevators approximately 1,000 feet a minute in three seconds from standstill, and today I am specifying elevators for regular passenger service that reach a velocity of 800 feet a minute from standstill in four seconds. These velocities save time on the express runs. Comparatively speaking, they save little on local stops.

This phase of the problem—the study of the effect of acceleration and retardation on the passenger's bodily and nervous system—involved a year of experimental research. The general solution has been made public.[4]

But experiment indicates that no stops can be made accurately by car switch at these speeds and rapid acceleration. Stops must be automatic, and so the time consumed by false stops made at ordinary velocities with manual car switch operation, and the resulting "inching" to landings is eliminated. Such false stops ordinarily exceed 50 per cent of the normal stops.

Next, we must save the time consumed in operating car gates and landing doors by hand. Such manual operation consumes from four to five seconds per stop.

[3] "The Probable Number of Stops Made by an Elevator." Jones, *General Electric Review*, Vol. XXVI, No. 8, p. 583.

[4] "The Time-Velocity Characteristics of the High Speed Passenger Elevator."—Jones, *General Electric Review*, 24 February, 1924, page 111.

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Here much time is lost. I have specified and obtained power operated devices for gates and doors which complete the opening and closing cycle in two seconds, silently without material rebound, and which will stop if a passenger is in the way. The gates and doors are interlocked with the car operation and leveling devices so that the gates and doors are opened automatically, and fully open when the car reaches the landing. The car cannot leave the landing until both gates and doors are closed and locked. Then the car departs without any further action on the part of the operator. No passenger car should be operated without a car-gate and interlocks. Over 80 per cent of the accidents to passengers are due to the omission of these devices.

Time is also lost through the bad memory of the operator. It requires a certain mental gift to remember six or more numbers called in any order by as many different people. So the operator passes landings and has to go back. This, I have corrected by giving the operator buttons, one for each floor to push when the number is called. Once any button is pushed, the car will stop at that landing and automatically open the gates and doors without any further action on the operator's part.

Thus the working of the car is as nearly automatic and fool-proof as reasonably possible, and, what is more, it is safer than the usual hand-operated equipment.

There is yet another place where material time may be saved. This is in speeding up the waiting passengers on the landings. I am using lanterns with 75 watt lamps, red for "down" and green for "up," so that not only is the lantern bright in competition with the illumination of the corridor, but also the color of the signal is distinct for both directions.

The landing call buttons are tied into the car control, so that operating the button automatically stops the car at the landing unless it is by-passed. The operator does not necessarily know that the car is going to stop. His job is not to bother about the signals but to speed up passenger movement.

You will note that to a considerable degree the car is operated by the passenger who merely registers his desire in the control apparatus. The car is literally signal-controlled. The operator almost becomes a guard or policeman who requires but little training and need not be possessed of any marked skill.

Lest you associate this elevator with the ordinary push button private house elevator, let me assure you that it is quite a different breed. For about a year the first machine was run under very severe factory operating conditions before any attempt was made to complete the installation.

And now, since with the reduced number of cars maintaining the schedule becomes important, I am using an automatic schedule machine which withdraws signals and by-passes them if a car gets behind time. This machine keeps both the starter and the operator informed as to whether the car is on time, ahead of time or behind time, and also when the car should leave the ground floor. The whole device is adjustable so that the schedule may be set by the starter or despatcher to suit the traffic.

Obviously it is quite as important, if not more important, for the starter to know what is happening to the waiting passenger than it is for him to know what is happening to the car. Therefore I have substituted, for the usual position and motion indicator, a waiting passenger-indicator which informs the starter when a landing button has been pushed and when the call has been answered.

Lightening the Owner's Financial Load

I have gone into this matter in some detail, first because of its peculiar interest, and secondly, because so far as I know it represents the first effort to meet the traffic conditions in the modern tall building built under the zoning law.

I count myself fortunate that the client for whom this was worked out was patient enough and far seeing enough to realize that in spite of the apparent high first cost of the individual elevators, and the possible delays due to the development of new devices and apparatus, it represented sound economy in building operation. The saving to him is just this: At the usual velocity of 600 feet a minute attained in 5 seconds from standstill with manual car and door operation, 8 cars would have been required to maintain low grade service with a 30-second interval. This poor service, together with the loss of already restricted floor space, raised a question as to the advisability of erecting the building above the sixteenth floor. But it was estimated that six push button signal-controlled cars will maintain first class service with a 20-second interval. Therefore, two hoistways and the corresponding corridor in grade A rentable space are eliminated on twelve floors—a total of approximately 3,000 square feet, and a further 3,000 square feet of grade B rentable area in the lower parts of the building. Shall we be conservative and put it all in at $3 a square foot per year? Then here alone the owner saves about $18,000 a year. Two operators, at $1,800 a year are eliminated. If the building manager is paying less than this for operators on manually operated machines, he is probably wasting money on his elevators. Two hoistways through 30 floors with fronts and doors are eliminated at at least $400 per floor per hoistway, a total in first cost of $24,000. Let us put this in at 10 per cent on the money, or $2,400. Comparing the 6 cars with the alternate 8 cars, the owner saved about $20,000 in the first cost of elevators and signals alone, which at 12 per cent is $2,400 a year. So the total annual saving is at least $26,400 a year, which to be conservative represents an investment of $264,000 at 10 per cent. But most important for both owner and architect, the change made the projected tower a practical possibility.

If a general statement will not be taken too literally or misinterpreted, I may say that elevators of the special type described above will give 25 per cent better service than an equal number of elevators of the entirely manually operated sort traveling at 600 feet per minute attained in 5 seconds from standstill. At least recent traffic measurements have indicated the possibility of an improvement of this magnitude.

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I have another case on hand in which without the push button signal control, but with high car speed, power operated gates and doors and automatic stops, 3 elevators have replaced 4 and possibly 5 in a very much restricted floor plan. I have yet another very high grade structure, designed and partly built without proper elevator engineering advice, in which the use of the push-button control together with all the rest, brings the service from casual up to intermediate. In this case only a given number of cars could be used, neither of the best size or shape for the case, and unfortunately restricted as to arrangement.

The Effects of Inadequate Systems

This is a difficulty which I often have to face. The architect has prepared his plans, even let the steel work which may be in course of erection, and has provided hoistways either of insufficient number or of such dimensions that cars of the proper size and shape cannot be installed, or he may have done both. As I have previously told you, the size of the car depends on the service required. The better the service the larger is the number of cars required, and the smaller need be the individual car. The shape of the cars is quite as important as their number. The deeper and narrower the car, the longer is the time required to load and unload passengers. In many cases which have come to my attention this question of car shape has proved to have a very serious effect on the service.

In this connection you may be interested in one or two cases. Some time ago I was called in to study an elevator system in a very important building which had proved to be inadequate. A traffic study indicated that practically normal conditions for the type of building and class of population existed. The primary trouble was the existence of too few cars, of slow speed and very poor shape. A count showed an actual maximum standing time at landings of nearly a minute. It was necessary nearly to empty the car and refill it so that a single passenger could get out.

In another recent case a traffic study showed a rather interesting condition. As is common with this particular character of building, chiefly occupied by bankers and brokers, the population has steadily increased for several years, and due to the increased use of runners and messengers, the interim traffic, or traffic between the arrival and departure peaks, had reached a value only slightly less than the arrival peak. The arrival peak was approximately normal for this class of tenancy, but due to the crowded conditions partly brought about by the use of narrow deep cars, the peak had spread out over a considerable period of time. This is interesting as it shows that the population, like the subway traffic, has to a certain extent adapted itself to the situation. Those who can come and go earlier or later as the case may be. Increasing the capacity of the elevators would reduce the duration of the peak to that extent, but would not decrease its amount.

A careful statistical study of this case showed that the only possible solution was a complete remodeling of the entire elevator equipment, including increased velocity, power operation of gates and doors, and—most important—a change in the size, number, shape and arrangement of cars. In other words, the radical medicine was a new elevator equipment from the ground up. This, for obvious structural reasons, was impractical, and the owner was advised either reduce his population or to change its class. These are merely typical cases used to illustrate the importance of proper traffic data as a basis for design.

Some Other Controlling Factors

I do not wish to leave this subject without drawing to your attention several matters relating to occupancy, not yet mentioned, which have a very definite relation to elevator traffic and hence to the design and arrangement of elevator plant. I will merely mention these subjects in passing. They are:

1. The increasing proportion of females among the tenants, who require special toilet facilities. For various reasons women visit the toilets much more frequently than men. If this requires use of the elevators, it may result in a material interfloor traffic, and will increase the round trip time.

2. Restaurants and Clubs, if not located with good judgment, may seriously affect the elevator traffic.

3. When a single tenant or a number of connected tenants occupy several floors, a heavy interfloor traffic may result. In some cases this has seriously modified the traffic schedule on which the elevator plant was based.

4. In building occupied entirely or principally by one tenant, the resulting interfloor traffic may control the situation.

5. The arrangement of the elevator banks should be flexible, so that as the distribution of population among the floors changes, as it generally does, the bank serving the more densely populated floors will not become overcrowded.

These are matters which the renting agent must always keep in mind. He should be familiar with the limitations and capacity of the elevator equipment, and, so far as possible, guide himself accordingly.

In closing I wish to remark that many of the traffic data and timing observations brought to my attention, on statistical analysis prove to be inconsistent. Generally the methods of observation used are not based on correct fundamentals and are seriously in error. Only as such defects are eradicated can we hope to arrive at sound standards for comparison of elevator plants.

In this, as in other engineering fields the stop watch-slide rule method must be substituted for the kitchen clock-thumb rule method. We must cease designing elevator plants on hunches. It seems to me that the method of hunches is still a general rule in the building industry.

Bassett Jones.

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"The New Poverty" in Architecture

IN THE pages of *Punch* nowadays one sees references to the "New Poverty." By the time the necessity for reducing expenditures and living in a simple style reaches the pages of a humorous magazine it is no longer—if I may use a bald paradox—a laughing matter. The war and the aftermath of war have cut into incomes in England; while the long period of unemployment, the harassing beggary which confronts one on every street in the bigger cities, and the threat of a socialistic organization of society which will still further reduce the opportunities of living by owning, have made the conspicuous display of wealth something worse than bad taste.

One might think that all this boded hard times for architecture; for the architect, as the preface to *The Smaller House*[1] says, has been faced with the necessity of building so that not a halfpenny be wasted. The result, on the contrary, has been to achieve within less than a decade a fresh orientation of architecture in England, which all the preaching of Ruskin and Morris, and all the practice of the last generation of vernacular revivalists, were not able, out of season, to accomplish. Here, at last, is something consistent enough to be called a style, and it belongs to no century but our own. Confronted by a dank smell, one no longer risks being informed, like the lady in *Punch,* that it goes with the Tudor period.

It is instructive to compare the achievements in *The Smaller House* with the excellent representation of *English Interiors in Smaller Houses.*[2] In even the more modest sort of house of the Renaissance, between the time of Wren and that of the Brothers Adam, the character of the formal design dominated the interior finish of a building: a Renaissance house remained what it was, no matter what local materials were at hand, no matter what the character of the landscape was, no matter what the disposition of the inhabitants. The Renaissance style developed in England during the period of riotous commercial enterprise which followed England's defeat of Holland, her rival for colonies and overseas wealth. During the eighteenth century the gains of the merchants and the great landed proprietors were supplemented by wilder adventures abroad, and by coal royalties from which some of Adam's patrons had begun to derive an income.

With a surplus of resources at hand, the main effort of the Renaissance architect was to display the elegance, the taste, the classic culture, and above all the wealth of his patron. In doing this, the color and variety of personal tastes were submerged: the subtle differences in cut and trimming which distinguish one person's dress from another's in everyday life were lost in the universal masquerade; to be one's self was to act in the character which had been assigned by those lovers of the classic past who guided the age. The great skill in craftsmanship involved in carrying out Renaissance designs in ornament, the thorough finish which characterized even the minor work, are qualities not unassociated with good building. Classic ornament itself, however, no longer can give us the æsthetic delight which it gave to Chambers and Burlington and their contemporaries; we see only an arrangement of forms in space, whereas they were inspired by a vision comparable to the vision of Platonic archetypes; they saw in the architecture of their time a fulfillment of a new civilization, a fulfillment which gave a special emotional color to each form.

Today this vision has faded. The New Poetry has stripped the masques from architecture and left the naked face; and we who live in a machine age, steeped in the sterile forms of a mechanical culture, are a little disturbed, perhaps, by the ancient facility for fancy dress. If a cold, utilitarian treatment is unsatisfactory, the ancient warmth and repletion is even more so. Just as the sculptor today had rather deal with the naked planes of the body than labor over the infinite varieties of fold and contour in fancy dress, so the architect has found it wise to center his creative efforts upon necessities—indeed, under the conditions by which domestic architecture is now being produced in England he has no choice. Sometimes the result is a little bare and anomalous, as in Mr. Louis de Soissons' house in High Oaks Road; sometimes it is decisively good, as in Sir Edward Lutyen's Middlefield; but always the result bears some sincere relation to the needs and requirements of modern life, and to anæsthetic sentiment more or less in harmony with the better aspects of that life.

The same simplicity has come into interiors, even though, as in the house at Long Wittenham, Berks, by E. G. Dawber, the scheme of decoration has all the delicacy and fineness of line which one associates with the most characteristic 18th century work. In the early days of the vernacular revival the chief designers—Morris himself, for example—were guilty of the very practice they reviled, namely, of copying the past, instead of living anew in the spirit they admired. There was, perhaps, a crudity and starkness in the early work which, however admirably it witnessed the honesty of the builder, had nothing to do with our own feeling and taste. Some of the modernists on the continent, on the other hand, in revenge for the historical piety of the established schools, have perhaps emphasized too heavily in their designs what was peculiar to our modern mechanical regime, forgetting that no matter how far we are children of the machine, we are still human, and require for our nurture and delight a somewhat different environment from that which a dynamo or a blast furnace would find to its liking.

In the modern English work we have been considering there is neither a crude return to the past nor a crude overemphasis upon the industrial characteristics of the present; some of the designs are strong, some are light and graceful; some feature the entrance, some the sleeping porch, some the loggia; some are bent on internal economy, and some are designed with an eye to the traditional fitness of the building in the landscape. Both

[1] The Smaller House: Being Selected Examples of the Latest Practice in Modern English Domestic Architecture. The Architectural Press.

[2] English Interiors in Smaller Houses: From the Restoration to the Regency, 1660-1830. M. Jourdain. Charles Scribner's Sons.

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plans and elevations show a variety of choices as numerous as the variety in the character of the occupants, in their daily work, and the scene they walk about in; and yet the general characteristics of simplicity and directness characterize all the work which is here shown. The houses range in cost from £1,400 to £5,000; some are located in Welwyn or Hampstead, part of a group, and some are isolated on country estates. Without strain, without pretense, these houses compare favorably, it seems to me, with the best sort of work which has been done in America or on the continent. The English may well be thankful if the New Poverty has brought back in architecture some of that old skill which made a poverty of means tolerable before the coming of the machine.

Marginalia Architectura

One hundred and ninety-nine years ago, the second of March, there was born at Venice a great adventurer, Jaques Casanova. There is much of interest to the architectural profession and to the illuminati in general in the memoirs of this remarkable man. As Edward Maynial in his preface to *"Casanova et son temps"* says, one finds there one of those living documents, new and original, which constitutes a most valuable history of the society and manners of the 18th century.

Like Brantôme, Casanova spent the last twenty years of his life in writing his memoirs. He also wrote on a diversity of subjects including history, science, art and belles-lettres. One quaint title reads "Icosomeron, or the History of Edward and Elizabeth, who dwelt for eighty years among the Megameickes, the aboriginal inhabitants of Protocosme, in the interior of our Globe." (5 vols. Prague, 1788 and 1800. 8vo.) Another is "Corollary on the Duplication of the Hexædræ." (Dresden, 1790. 4vo.)

There has recently been unearthed at Dux a great quantity of his manuscript, in his lucid and beautifully written script. An essay on Manners, Science and Art in twenty-seven chapters (grand in-fol.) is a treatise on Slavery, Liberty, Well Being, Riches, Princes, Politics, Logic, Natural History, Chemistry, Mathematics, Theology, Courage, Atheism, Astronomy, Theosophy, Sacred History, Poetry, Architecture, Painting and the Latin Language.

During the forty-two days of his incarceration in the Citadel of Barcelona, he employed his time alternately in writing chapters on "The Refutation of the History of the Government of Venice" and for lighter amusement, pencil drawings of architectural plans and imaginary compositions! (There is nothing so soothing to the soul as imaginary compositions, the picturing of the market place in Ancient Carthage, the restoration of the palace of the Minos at Khnossus, or the Hanging Gardens of Babylon. (V. Wm. Walcot's Etchings for fine examples.)

* * *

At the early age of eleven, Casanova was a precocious child, as shown by the story of his answer in Latin pentameter to the question which an Englishman of letters put to test his pronunciation.

It may readily be imagined what an impression such a man, at the age of thirty-two, suffused with the halo of romance, fresh from his marvelous escape from "Les Plombs" (one of the most famous exploits in history, tense and seething with feverish ebullition), in the full flower of his age, rich, handsome and magnetic, would make on the impressionable heart of a beautiful young creature of the gay, golden days of the gallant 18th century. Such a one was Marie Madelaine Balletti, lovely daughter of Sylvia Balletti, the adored and adorable favorite of the Théâtre-Italien.

O! Mater pulcher, filia pulchrior, as Horace so fittingly remarks. Nattier painted the portrait of Manon Balletti as Thalia, and exhibited it in the Salon of 1757. The painter has represented her seated, enveloped in harmonious draperies, holding in her left hand a masque, and raising above a head crowned with ivy, with a movement of the hand and right arm full of natural grace, the curtain of the theatre. The face is of the most delicate oval, the eyes are well formed, brilliant and langorous, the cheeks fresh, the *bouche mignonne et charnu,* the eyebrows perfectly drawn, the bosom young, pure and firm. "In truth, if Nattier has not deceived us, Manon Balletti, in 1757[1] was a most lovely and gracious young girl," says Charles Samaran, who tells the story in detail in the chapter on "Les Amours de Manon Balletti."

* * *

For nearly three years, Casanova exercised all his seductive wiles in vain until Manon, who passionately adored him with all the fervor of her innocent young heart, finally tore herself loose from the basilisk, during his absence in Holland in July, 1760. Her fortunate decision was doubtless hastened and confirmed by certain details of a questionable nature that came to light about this time, concerning the adventurer's financial transactions. The old boy, who was rather hard hit himself, took the jilting in very bad grace and suffered a severe attack of the spleen coupled with a violent migrane that confined him to his room for three days.

"Be wise," wrote Manon, "and accept with sangfroid the news I give you. This packet contains all your letters and your portrait. Return mine, and if you have preserved my letters, do me the favor to burn them. . . . Think no more of me. For my part, duty compels me to do all in my power to forget you, for tomorrow at this time, I shall be the wife of M. Blondel, architect to the King and member of his Academy. You will oblige me much, if on your return to Paris, you will make the semblance of not knowing me, in case by chance we should meet."

[1] This portrait, catalogued "Comedy," brought only 15,000 francs at the Kraemer sale in May, 1913. Cf. P. de Nolhac, J-M. Nattier, painter to the court of Louis XV., Paris, Goupil, 1905.

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François-Jacques Blondel, architect to the King and member of the Academy of Architecture, was in 1760 about fifty-five years old. He might easily have been Manon's grandfather, for she was scarcely twenty. By a previous marriage there was a son Georges-François, Architect of the Academy of Marseilles and professor of the School of Arts.

Blondel pére, however, was a man of knowledge and talent, highly esteemed for his many virtues and the great gifts with which nature had endowed him. It may be doubted that this mature and grave genius acted wisely in contracting a second marriage with a young girl more than thirty years his junior. The union, nevertheless, proved a happy one, and the Blondel ménage flourished for nearly fourteen years until the death of the architect on the ninth of January, 1774.

* * *

In 1761, on Casanova's return to Paris, he called upon Madame Vanloo, who asked him to stay to dinner. He accepted, but when he learned that Madame Blondel was to be one of the guests, he declared that as a man of honor he ought not to find himself willingly in a place where she might be.

The following day he learned from Madame Vanloo that Mrs. Blondel had asked her to thank him for his consideration but that Mr. Blondel was quite vexed not to have seen him and expressed to him all his obligation.

"It is not to me, but to Manon that he owes the obligation," said Casanova, "they tell me that they have a *joli poupon*,[2] and that Blondel lives at the Louvre while his wife dwells in another house, rue des Petits Champs."

"That's true, but he takes supper with her every evening."

"What a droll ménage!"

"Very good, I assure you. Blondel *ne veut avoir sa femme qu'en bonne fortune. Il dit que cela entretient l'amour, et que, n'ayant jamais eu une maitresse digne d'être sa femme, il est bien aise d'avoir trouvé une femme digne d'être sa maitresse.*"

During the last years of her life, Manon was constantly assured of the affection and sympathy of such women as the beautiful Madame Carle Vanloo, architects, artists, writers, like Julien—David Leroy, the German painter Mannlich, and the good Michael—Jean Sedaine, dramatic poet and author of *"Richard Coeur de Leon," "Arline, Reine de Golconde"* and *"Le Philosophe sans le Savoir."*

Manon's second son, Jean-Baptiste Blondel, born on Christmas eve, 1764, became a famous Pontist (Arch. Nat., Y 12079, Comm. Defresne) and one of the architects of the city of Paris. A very wonderful family!

* * *

The high esteem in which the mediæval Latin students' songs (translated into English verse by John Addington Symonds) are held, emboldens us to refer to still another early effusion of Sir John Suckling's salad days—those rollicking nights (*sic*) when spring was in the air and the "merrie draughtfmenne" of Inigo Jones' office gave throat to "the fountain of the Bacchic chant swelling . . . with the rattle of the dice box ringing in their ears," while the gibbous moon hangs low on the timbered gables of the pothouse. (The Bear at the Bridge-foot?)

"Bacchus saepe visitans
Mulierum genus
Facit eas subditas
Iibi, O tu Venus."[3]

Like Horace's Ode to Lalage the words of these songs fairly leap out at one from the printed page. The manuscript is yellowed with time and the title, scarcely discernable, reads, "Ye draughtfmennes Springetyme Drinkinge Songe."

"Inne ye fpringe a richer colour comes upon ye festive brewe,
Inne ye fpringe ye wanton draughtfmanne cafts about for fomethinge newe,
Inne ye fpringe hif purse if fuller for hif jerkin's[4] inne hock,
Inne ye fpringe ye younge mannes fancie lightlie turns to thoughtf of Bock.

Choruf

O! ye Bock beere of fpringetyme if foaming withe foam,
Ye blithe gladfomme draughtfmenne now nightlie doe roam,
Ye pale ambre colore of ufual beere,
Hafs quite gotte ye goebye fince bock beere if here."

H. G. R.

From Our Book Shelf

Things Egyptian

The desecration of the tomb of Tutankhamen has been an event of great journalistic profit. Possibly there may be other benefits as time goes on. But whether these, if any, will ever justify the sacking of a sacred mortuary resting place is at least doubtful. For the moment we have a flood of pseudo-Egyptian, and although it happens to run blithely in the general course of that reversion to our unsensed but persistent pursuit of the joyous splendors of what we used to refer to quaintly as barbarism, it is likely to prove no more than a fancy, to be forgotten for the next.

Publishers of books, however, are not to be caught napping, and a small stream of Egyptological character already pushes its way athwart the ceaseless flow of ink. Of the resulting books, one turns confidently to "Social Life in Ancient Egypt,"[1] for its authorship gives a confidence not easily parted with in these days. And one is not disappointed. Here is a very simple and yet a very human and scholarly account of the ways of early Egypt,

[2] Blondel had two sons by Manon, the first, born the nineteenth of November, 1761, and died the following day. In writing his memoirs Casanova may well be pardoned a slight error in chronology in recalling events which occurred 35 years previously.

[3] *Carmina Burana.* Stuttgart, 1847.

[4] Jerkin (Cyrtelkin, Sax. of Cyrtel. a coat.) a short upper coat. Nathan Bailey.

[1] *Social Life in Ancient Egypt,* by W. M. Flinders Petrie.

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where the Nile lent a rhythmic flow to life such as we know nothing of. The great river was the literal source, for without it there were there no humans. And this direct and inexpressibly simple phenomenon, understandable by all, uncomplicated by despots, politicians, bookkeepers, and educational institutions, resolved human existence into a colorful thing. The atmosphere of dread, of barbaric cruelty, of vile slavery and serfdom that has so ignorantly been conjured up as the firmament of Egyptian existence in the early days seems now to be as fraudulent as most of the other things that are taught in books, prepared for the purpose, it too often appears, of exalting ourselves and our ways, and deprecating those of others.

In a somewhat more popular form is Dr. Blackman's book.[2] It suffers a little, one feels, from a certain effort to draw smart analogies, but it is not too dull reading, by any means. Mr. J. A. Hamerton is editing the contributions of a group of specialists, including Messrs. Sayce, Petrie, Weigall, and Mackenzie.[3] The object is to produce, or really to reproduce, a picture of the ancient world. Four volumes will be required for the work and the first of these is already available. It touches upon Halicarnassus, Angkor, the Memnonium, Pompeii, Thebes, Philæ, Nineveh, and naturally the treasures of Tutankhamen. Finally there comes Professor Perry's fascinating tale of The Golden Age[4] that once was, when men hunted beauty for beauty's sake. It is a scientific work and the cited authorities are all there. But the interest, yea, the fascination, of the book lies in the theory that the golden age was not born of a romantic wish but once was in very being. It passed away because its people resorted to human sacrifice and this led to war and the loss of art as the basis of life. Egypt was the cradle of it all, and since we know what Havelock Ellis has said of dancing, and particularly of dancing in Egypt, why is not Professor Perry's tale as credible as any of the rest? Sometimes we can scarcely escape the feeling that the expression of life was once the business of life, and that beauty was the completely satisfying religion. Why else, we might inquire, is it that great beauty moves us to tears?

H. C. B.

The Spires of London

It is not always that introductions are read even by reviewers, but I read carefully all of the introduction to *Ancient London Churches* and to me it was not the least interesting part of the book, but it had nothing to do—that is for the most part—with Ancient Churches where as Dickens says, "Dead citizens in clouds of dust arise when we stamp our feet on the cold pavement and where dead citizens on other clouds of dust are exhaled in Te Deums from wheezy organs." No it had to do mostly with the limbo of Mid-Victorianism—ancient churches we can read about in Baedecker; modern churches in the newspapers, but where before has been the historian who could tell us all about what happened in churches in the forties, fifties and sixties—and what Pugin and Scott and Street and Bodley built—a period in every land too near to be history and too far away to be news. Who has ever written anything in our own country of that no man's land in architecture which began with the end of the classic revival and ended with the onslaught of Richardson, Hunt and McKim?

But *Ancient Churches* it is and *Ancient Churches* we must consider. Those who were acquainted with *Cathedrals of England, Scotland and Wales* will not be surprised at the erudition, the careful writing, the beautiful illustrations of this latest book by T. Francis Bumpus. Knowing St. Margerets, the Temple Church; St. Bartholemew's, the church of the Austin Friars; the chapel in the tower, and old Chelsea, I thought I knew my mediæval, ecclesiastical London pretty well but here is St. Ethelreda's and St. Helen's—Bishopgate and All Hallows Borking and St. Mary the Virgin and St. Dunstan's Stepney—to say nothing of St. Catherine Cree, and St. Andrews Holburn and All Hallows Tottenham—any information about which was decidedly in the nature of news. That churches which fed the imagination of the youthful Poe—which closed their doors on the pleading Wesley and which echoed the unfaltering creed of Sir Thomas More—could exist today almost in dozens and be unknown to the general, to say nothing of not uninterested architects, speaks among other things of the fecundity of the middle age and the vastness of "all that mighty" heart which we call London.

All of these venerable buildings are treated with loving care and minute detail: Mrs. Brown gives a credence, Jones and Smith rebuild a broken window. The matter of organs and church music especially interests the author. In the 18th century, it seems, London was divided into two factions; those who held for Herr Schmidt as the world's greatest organ builder and those others equally vociferous and belligerent who claimed a Mr. Harris was entitled to that distinction—a lively antiphonal to the diapasons of their creations.

Generations come and go. Lancet makes way to Decorated, Decorated to Perpendicular. Henry VIII and Cromwell uproot and destroy, but each springtime of tolerance revives the bloom and the ancient churches live on.

The second half of the book is devoted to the Wren churches. To Bumpus Sir Christopher is "a heaven born architect," "the pride of London," and his work unexcelled by those who preceded and unequalled by those who followed. Here we are on more familiar ground and we need no T. Francis Bumpus, as erudite as he may be, to point out the beauties of St. Brides, St. Mary le Bow, St. Stephen's and St. Margeret's—we are bone of their bone and flesh of their flesh—and we see their lovely daughters today, with their white fingers pointed to heaven, alike in the shady lanes of our New England villages and the broad plantations of the Carolinas.

Mr. Bumpus has written an excellent book, interesting to the quiet reader and lover of old and queer things and invaluable to the searcher for those tenderest of Architectural blossoms—ancient churches.

THOMAS E. TALLMADGE.

[2] *Luxor and Its Temples*, by A. M. Blackman.

[3] *The Wonders of the Past: The Romance of Its Antiquity and Its Splendours.*

[4] *The Children of the Sun*, by W. J. Perry.

[5] *Ancient London Churches*, Revised Edition, by T. FRANCIS BUMPUS; T. Werner Laurie, Ltd.

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Inside Old Houses

"Some XVIIIth Century Designs for Interior Decorations"[1] is the title of a book of plates of details, without text, from the published works of Abraham Swan, with an introduction by Arthur Stratton, F.R.I.B.A.

Abraham Swan appears to have had more of a reputation as practical builder and wood-worker than as architect, and his four published books—*The Builder's Treasury of Staircases, A Collection of Designs in Architecture, Designs in Carpentry,* and *Designs for Chimneys*—were published for the benefit of the journeyman builder who designed and built homes for the middle classes.

His book, from which this collection of plates was taken, dealt especially with the preparation of standardized designs for homes and the decorative treatment of reception rooms, staircases and chimneys. His work was essentially that of the carpenter and joiner.

These plates are divided into five parts, which are listed as follows:

PART 1.—Designs for Interior Decorations. PART 2.—Interior Details and Chimney-Pieces. PART 3.—Designs for Staircases and Staircase Details. PART 4.—Plan and Façades of Country Houses. PART 5.—Designs for Bridges in the Chinese Taste.

Swan also supplies from his workshops many of the chimney-pieces and interior details of certain London and country houses and in the Geffrye Museum, Kingsland Road E., there are preserved panelled work and chimney-pieces which are peculiar to his manner. Some of the details are quite similar to those published in his plates.

Certain of these plates show the manner in which his decorative schemes were solved. He divided the walls into three parts, a dado or sub-base, a panelled surface and an entablature uniting wall and ceiling. He strove for good proportion, as shown in his works: when the entablature was large and the dado high, the room appeared lower than it was actually, whereas the reverse treatment gave height. He points out other rules, namely: where the frieze is enriched it should be enlarged and the architrave diminished in order that the whole entablature may not exceed its proportional part. His cornices are given a height of one eighteenth of that of the room.

Much credit is given to Swan for helping to establish and maintain the traditions of sound design in the minor domestic architecture of England during the 18th century.

W. L. RISLEY.

Groups of Houses

The architect who builds houses more than one at a time, or the person who is interested in developing low-cost houses, will find excellent material in *Small Houses for the Community.*[1] Mr. Raymond Unwin, an excellent and justly reputed authority, has some useful advice to give in the Foreword, and the author speaks from a wide experience. What has best been done in England since the war is well illustrated, but there are also fine examples of what has been done in other countries where housing has become a national issue and no less.

The patient student will find, in the complete "Specifications" and "Bills of Quantities" printed in full, something worth knowing, we imagine, no matter how familiar he may be with either of these subjects. The book is typographically excellent, the illustrations having been made from well studied photographs and the letterpress being large and readable. Altogether a book of genuine interest and worth. S. R.

[1] John Tiranti & Co., London, 1923.

[1] By C. H. Jones, A.R.I.B.A., and F. R. Yerbury, with foreword by Raymond Unwin. Crosby, Lockwood & Son, 1924.

Books Received

Electrical Measuring Instruments, by D. J. Bolton. The D. U. Technical Series. E. P. Dutton & Co. 1924.

1924 *Municipal Index.* A Yearbook for City, Town and County Officials and for all others interested in Municipal Progress and Public mprovement Activities. American City Magazine. 1924.

Book News

Bertram Grosvenor Goodhue

ANNOUNCEMENT OF THE MEMORIAL MONOGRAPH

The Press of the American Institute of Architects will issue at as an early date as is practicable the monograph on the work of Bertram Grosvenor Goodhue. The work will need no introduction to the architects of America and complete details will be announced in a later issue.

The Autobiography of an Idea

By LOUIS H. SULLIVAN

In the *Chicago Tribune's* list of "Best-sellers" for June *"The Autobiography of an Idea"* appeared as one of the three best sellers in the non-fiction field. The book is being reviewed most favorably in the public press and the first printing will soon be followed by the second, and, we hope, the third and more.

IN Indianapolis as in Chicago, reports the *Indianapolis News, "The Autobiography of An Idea"* is leading the list of "best-sellers" in the non-fiction class of books.

A System of Architectural Ornament

By LOUIS H. SULLIVAN

We are indeed happy to announce that this book has been placed, by the American Society of Graphic Arts, in the list of the "Fifty Best Books" published in the United States in 1924, and as such it will be publicly exhibited.

Masters in Architecture

This series, dealing with Inigo Jones, Chambers, Vanbrugh, and Hawksmoor, gives an excellent and comprehensive idea of the work of four eminent English architects. Other volumes are to follow.

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Building Congress Notes

Seasonal Employment

The Building Owners' & Managers' Association of Philadelphia, after conferring with the Philadelphia Building Congress has taken the following action:

Resolved, that the Board of Directors of the Building Owners' and Managers' Association of Philadelphia recommend to all members and to all owners and managers of large buildings in the City of Philadelphia that they defer such of their maintenance and repair work as can be conveniently postponed until such periods during the coming winter as there might be a lull, or easing-off of conditions, in the building and construction industry.

This action is being taken to help reduce the unemployment problem when winter comes again. "Seasonal employment" is recognized as one of the evils in the labor situation. Large numbers of men, by the nature of their profession or trade, are employed only a part of the year.

A brief survey has disclosed that much repair work, now crowded in the summer months, could be done just as easily and perhaps more efficiently during the slack winter period.

The Letting of Contracts

The Selection of General Contractors and Sub-Contractors

Desirable Procedure

In the interest of the building industry and the efficient, economical, and workmanlike execution of contracts, the Boston Building Congress urges upon Owners, Architects and Engineers, the adoption of the following practices in securing estimates and awarding contracts:

(1) Do not ask for competitive approximate estimates unless adequately paid for.

(2) Furnish complete, clear and accurate plans and specifications when asking for bids.

(3) Invite only a limited number of Contractors to compete, six generally providing adequate competition.

(4) Invite for a given piece of work Contractors of substantially equal ability and standing.

(5) Invite only Contractors to whom you are willing to award the contract.

(6) Having invited bids as provided above, award the work to the low bidder, unless other considerations than price are to enter into the award, in which case make this fact perfectly clear in the notice to bidders.

(7) Where the time for the completion of the work is important, name a definite time, on which all bids shall be based. Do not invite bidders to name their own time limits as well as their prices.

(8) Eliminate as far as possible Unit Prices, Alternate Estimates and Secondary Estimates when asking for bids.

(9) Do not award a General Contract without determining in advance the Sub-Contractors to be used on the principal portions of the work.

(10) In order to determine Sub-Contractors in advance follow one of the following methods or a combination: (a) provide that the General Bidders shall name the principal Sub-Contractors they intend to use in their proposals; (b) submit to the General Bidders a list of approved Contractors for such important sub-contracts; (c) secure principal sub-bids and send a list of designated names and amounts to all General Bidders to be incorporated in their bids.

(11) Where work is covered by allowances to be adjusted after the General Contract has been awarded, reduce such items to the practicable minimum, and do not include under "Allowances" Sub-Contracts of major importance.

(12) In selecting bidders for designated bids, or allowances, or for separate contracts, give due consideration to their labor policy, according to the policy adopted for the General Contract.

(1) Approximate Estimates

Before actual bids are asked for, approximate estimates are frequently desired. A Contractor's detailed knowledge of actual costs is of value to supplement and check an Architect's or Engineer's judgment.

In asking for approximate estimates from Contractors, for the preliminary guidance of an Owner, the cost of making up such an estimate should be borne in mind, and if excessive should be paid for. A single responsible Contractor, familiar with the character of work involved and with the standard of work desired by the Architect or Engineer, can prepare an estimate which will have real value to the Owner.

The Architect or Engineer should give the Contractor as complete information, plans and instructions as possible. Approximate Estimates which are carelessly made are misleading to the Owner at the time when he most needs accurate information, and will react as unfavorably on the Architect, Engineer and Contractor as they may be annoying and expensive to the Owner.

(2) Plans, Specifications and Form of Contract

In asking for definite bids, complete plans and specifications are of course a first essential. Incompleteness, inaccuracy or conflicts in the drawings and specifications increase the cost of preparing the estimates and generally also add to the amount of the bid unless, through confusion or error, they result in mistakes that improperly reduce the estimate below a reasonable figure. In either case the result is unfortunate.

The method of handling a contract differs with the practice of the Architect or Engineer, or with the special conditions of a particular building operation, being generally one of the following:

(1) A General Contract, including all trades.

(2) A General Contract, including all trades except Plumbing, Electric, Elevators and Heating.

(3) No General Contract, each trade being let separately and handled through the office of the Architect or Engineer.

The last method is seldom used in this part of the country, though it is the rule in some cities.

In either of the first two methods there will be a large number of sub-trades handled by the General Contractor, and the method by which estimates are secured and General Contractors and Sub-Contractors selected for the work is important for all concerned, no less to the Owner and his Architect or Engineer, than to the Contractors themselves.

(3) Limited Number of Bidders

The cost of estimating is an overhead charge on the industry which has to be paid and it enters into the estimates for all buildings. It is desirable to reduce it to a minimum, and the first step is to limit the number of bidders invited. Five or six bidders will give the ample competition which the Owner desires to assure himself of the reasonableness of the Contract price. To invite ten or fifteen merely adds to the cost of estimating without adequate return.

(4) Selection of General Bidders

The careful selection of the General Contractors to be invited to figure is of the first importance and it must be recognized that all grades of ability are to be found in the list from which one must choose. It is at this point that the Owner, through his Architect or Engineer, must determine whether price alone should control the selection or whether and to what degree quality of performance is desired.

Assuming, for example, five grades of ability, it is undesirable as well as futile to ask Contractors of Grade A to figure in competition with Contractors of Grade E. This is too frequently done. If the A man becomes aware of it he generally either refuses to figure or submits a "safe" bid so high as to put him out of consideration. In either case, the Owner loses the competition which he seeks, and the A man, if he consents to bid, wastes his time.

The character of work expected should be determined and a limited group of bidders invited who are as nearly as possible of equivalent ability, and of the general calibre desired.

In selecting any but thoroughly skilled and efficient Contractors, it must be acknowledged in advance that something less than first quality work is expected and must be accepted. This applies as well to the administrative functions of the General Contractor as it does to the craftsmanship of the mechanics whom he and his Sub-Contractors employ. You cannot secure a grade of work higher than the ability of the man who performs it.

(5) Pacemakers

Sometimes a group of high grade Contractors are invited together with one of a lower grade, who is looked upon as a sort of "pacemaker." This is an undesirable and unreasonable practice. No one should be invited to bid to whom the Owner is unwilling to award the work. When a "pacemaker" is invited, either his time or that of the other bidders is being wasted.

(6) Award to Low Bidder Unless Otherwise Specially Provided

Having invited a selected group of substantially equal ability, to anyone of whom an award would be satisfactory, then under normal conditions, the Contract should be awarded to the low bidder. It should be borne in mind, however, that competition based solely on price tends to reduce the character of service and quality of work estimated on and performed and therefore to reduce the standards of performance in the industry.

Frequently the character of the work may be such that it is

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impossible to select a group of bidders that are exactly of equal ability to handle it as desired, and that, up to a certain amount, a higher bid may be offset by some special qualifications of the bidder. If factors other than the amount of the bid are to be taken into consideration in making the award, this condition should be clearly stated in the notices to bidders. The usual clause reserving right to reject any or all bids and to accept any bid is a legal protection that is desirable and reasonable in all bidding, but if special conditions will enter into the award in addition to price, it is only fair to the bidders that this fact should be clearly stated in advance, in addition to the legal reservations above referred to.

(7) Time Limits

Time is often of the essence of the Contract, and a time limit for the completion of the work involved in the making of estimates. Frequently the bidders are asked to state in their bids the time within which they will complete the work. This is an undesirable practice as it adds a second element of competition and confuses the award. If a time limit, with or without forfeit and bonus, is desired, a reasonable or the necessary time should be stated in the General Conditions of the Contract Form and all bidders required to submit their bids on this basis.

After bids are received, consideration of the effect of the time limit on the price may well be discussed with the successful bidder in order to determine how an earlier or later time would affect the cost, taking into consideration the use value of the completed building to the Owner. It should not, however, be taken up with other than the successful bidder as this would open up undesirable opportunities for cutting prices on the score of time in an attempt to defeat the legitimate advantage won by the successful bidder in the original estimating.

(8) Unit Prices, Alternate Estimates and Secondary Estimates

Unit prices required as part of a bid are confusing and very often fail of their purpose. Prices for units of work not carefully and accurately defined are frequently not properly applicable to the work as it later appears; and an elaborately itemized schedule of unit prices that will fit accurately all future contingencies is cumbersome and confusing. Unit prices on general building construction should be used sparingly and with caution.

Inclusion of alternate estimates in a proposal sheet is an undesirable practice. Where many are required it adds greatly to the expense and the difficulty of preparing a bid, and injects an element of confusion into the determination of the successful bidder. The major items of cost should be analyzed by the Architect in advance, the plans prepared on a basis as nearly as possible meeting the financial requirements and any further adjustments determined in conference with the successful bidder.

Secondary estimates, after the bids are received, upon various items, usually small and often reductions, introduce the chance for bidders to revise their original bids by quoting new prices widely at variance with the value of the proposed changes. This opportunity is often taken, making in effect a second chance to bid upon the entire work. This practice is therefore faulty because it requires contractors to bid twice, the second bids carrying a greater element of gambling and price cutting, which lead to business instability. The practice should therefore be discontinued whenever possible, and changes should be handled only with the successful bidder.

(9) Determine Sub-Contractors in Advance

The reason for a General Contractor is his ability to administer the building operation effectively, executing with his own direct employees certain portions of the work and directing the various Sub-Contractors and correlating their work so that proper progress is secured. It cannot be denied that many who go by the designation of General Contractor are incompetent to perform these important functions properly. Their experience, organization and reputation based on performance, should be more carefully investigated than is frequently the case before they are invited to bid. The "separate contract" system under the Architect or Engineer is preferable to the General Contract system with an incompetent or dishonest General Contractor.

In any event, generally a large majority of the work will be done by "Sub-Contractors." Their ability to perform the work is of great importance to the Owner. It is not sufficient to rely solely on the reputation of the General Contractor for he cannot produce for the Owner work of a better quality than the abilities of his Sub-Contractors and their mechanics.

Therefore, wherever quality of work is to be considered and not merely price, it is important to select Sub-Contractors with as much care as General Contractors. Many General Contracts, however, are awarded on a lump sum without any reference to the Sub-Contractors to be used in the work. Such a method is to be condemned. Unless the Sub-Contractors are known the quality of work figured on is not clear and the award is made in ignorance of this important fact. Such a method also encourages re-figuring of Sub-Contracts after the award for the purpose of securing lower prices merely to increase the profit of the General Contractor to the detriment of the Owner's interest.

All Sub-Contractors of importance should be determined before the General Contract is awarded and should constitute a factor in the award. This can be done in various ways.

(10) Methods for Selecting Sub-Contractors

(a) Sub-Bidders Named in Proposal

The simplest way is to require the General Bidders to name for the principal trades the Sub-Bidders whom they intend to employ. These names can be reviewed and any that are not satisfactory can be changed before an award is made. It should, in such case, be made clear in the notice to bidders that the character of the Sub-Bidders will be given consideration in making the award. The Owner will then be entitled to demand better Sub-Contractors of the low bidder, or to accept a higher bid if it is based on a better grade of Sub-Bidders. A General Bidder can easily produce a low bid by the use of a group of undesirable Sub-Bidders. If the General Bidders are to be justly compared on price, the groups of Sub-Bidders must be reasonably equal in ability.

(b) List of Approved Sub-Contractors

Instead of requiring the naming of Sub-Bidders in the proposal, the Architect or Engineer may submit to the General Bidders a limited list of Sub-Contractors in each trade, any of whom will be acceptable. In making up this list consultation with the General Bidders is often desirable. This will save the time of Sub-Bidders who might not be satisfactory and will simplify for the General Bidders the securing of estimates in these trades.

(c) Designated Bids

Another method that has been used to a considerable extent is to require Sub-Bids on certain designated portions of the work, from Sub-Contractors selected as set out in the preceding paragraph, to be delivered to the Architect some days in advance of the General Bids. A list of the selected Sub-Bidders and the amounts of their bids are sent to all General Bidders a day or two in advance of the date the General Bids are due. All General Bidders are instructed to base their General Bids on the use of this list of designated Sub-Bids.

The advantage of this system is that it permits the selection of a more satisfactory list of Sub-Contractors and eliminates this often complicated problem when the General Bids are under consideration, thus expediting the selection of a General Contractor and the award of the Contract. Sub-Bidders can submit their net estimates in the assurance that they will get the Contract at the price they name if at all. It permits the General Bidders to know the Sub-Bidders on the principal parts of the work at least a day or two before their own bids are due instead of receiving them within a few hours of that time.

The objections raised to this system are that it may weaken the control of the General Contractor over the Sub-Contractors so selected; that the Architect and Owner assume certain responsibilities by such procedure not otherwise assumed; and that under this procedure a General Bidder may have to assume a Sub-Contractor that is not satisfactory to him either in ability or on personal grounds. In answer to these objections, those who have used this system testify that control over Sub-Contractors has not actually been reduced in such cases; that it is possible that some added responsibility for the Architect is involved, necessitating carefully drawn documents, but that since the Contractor has more time to survey these Sub-Bids he is in a better position to assure himself that all points are properly covered and so may reasonably be held for all contingencies. As to assumption of unsatisfactory Sub-Bids, a General Bidder is always at liberty to state that a designated Sub-Bidder is not satisfactory to him and that his bid is based on the use of another named Contractor for such work. This would always be considered if his bid was low and his objection to the Sub-Bidder reasonable. In spite of the objections cited it appears to be the best procedure to follow where a high grade of work is desired.

(d) Above Systems Combined

The above three systems may be used in combination arranging for "designated bids" on a limited number of items of major importance and providing for the naming by the General Bidders of Sub-Bidders in other less important branches of the work, or, in some cases, the naming by the Architect of an approved list of Sub-Contractors.

(11) Specialties and Allowances

Some branches of the work are of the nature of specialties on which real competition is not possible, or which involve service by cities, towns, or public service corporations not subject to estimate. In such cases, the Architect must secure such estimates as he can for the particular work desired—in some cases only a single bid perhaps being obtainable. For all such work the "designated bid" is the natural method to pursue, and the Contractor expects to have such Sub-Bidders definitely selected by the Architect.

So far as practicable definite bids on these specialties should be obtained in advance of the general Bidding. Where not practicable to do so the work may be covered by an "allowance" and figured later. It is not desirable, however, to cover many important items in this way as it leaves the General Bidder in doubt, when submitting his bid, on matters that may have an important bearing on the progress of the work.

(12) Labor Policy

In a community where there is a general trade agreement in force it is wise for an Owner to determine definitely in advance whether his work shall proceed in accordance with such agreement using organized labor, or ignoring such agreement using unorganized labor. All Contractors on a job should be of the same kind in order to prevent delays and labor disputes. An Architect or Engineer in selecting Sub-Bidders, on any of the above mentioned plans, should bear in mind the general labor policy adopted for the work.

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Education

Professor Albert E. Ferran of the Massachusetts Institute of Technology, is returning to France next month to continue his work there.

In his address to the Boston Society of Architects on 6 May last, Professor Ferran spoke most interestingly on the *Ecole des Beaux Arts* and gave his views on the teaching of architecture in the United States.

"His remarks," we quote from the Bulletin of the Boston Society, "delivered partly from notes and partly extemporaneously, were followed with keen interest and absorbed attention. The speaker, who was naturally thoroughly conversant with his subject, spoke rapidly, and expressed decided views as to the methods and systems followed by our universities, pointing out the difficulties that are encountered by the academic requirements, the schedules, the hours, the credits, and many of the troubles that inevitably occur when the teaching of a fine art is made to conform to the strict rules and regulations that govern scholastic time-tables.

"In introducing his subject the Professor gave a brief outline of the *Ecole Nationale et Speciale des Beaux Arts* which was founded by Colbert in 1648, under the title of *Ecole Academique.* It received its present title in 1793. Pupils are admitted from the age of 15 to 30 years, after examination, in one of the sections of painting, sculpture and architecture. The school prepares pupils for the concours for the Grand Prix de Rome.

"The number of students has always been limited to those who were fitted by temperament and inclination to do the work required. In 1720 there were only twenty-two students although the school has been established more than seventy years. Unless the student obtains the required number of mentions and medals he is sent back to do the work over again until he does obtain them. At the age of thirty, he must leave the school.

"In 1761 Blondel started his academy, which by his *'Cours d' Architecture'* did so much to stimulate an understanding and appreciation of the art of building. In 1785 the Prix de Rome was established and Fontaine was the first *pensionnaire* of this famous institution. The speaker told of the origin of the lodge and the atelier systems, the latter by Blondel's son, the famous Pontist. During the revolution the teachers carried on the work from their private funds until the authorities saw that this was properly a government function and took it over accordingly. During four years there were some queer judgments when green grocers, coal heavers and cordwainers sat on juries, but soon the absurdity of this condition brought about the restoration of the school to its proper personnel.

"At present, there are three regular ateliers and sixteen independent ateliers. The average number of students is three hundred and fifty.

"The teaching of architecture in the United States is in a bewildering condition at the present time. There is no settled policy among our large institutions of learning, for the attempt is made to teach the student more than he can learn. After the saturation point is reached no more can be added or retained. The list of subjects that the architectural student is confronted with is appalling, and the meagre time at his disposal for *architecture* is indeed scant, perhaps a total of one hundred and fifty days in four years. Then the order in which subjects are taught is most important—the student barely receives a mere whiff of the divine afflatus during his first two years. Each year new courses are added and the proud parent, scanning the prospectuses of the various colleges of architecture sees that one university offers a course in landscape architecture, another adds town planning and a third a series of lectures on eugenics and the 'Origin of the Portcullis,'—wants his offspring to go where he, or she, as the case may be, will get the most—not realizing that only a limited amount may be absorbed, and that *architecture* is, after all, what the student must learn.

"At the close of his paper, Professor Ferran paid a glowing tribute to this country and spoke in the highest terms of the friendship that France cherishes for us. For our part, we all feel the obligation and the immeasurable debt that our architecture and our architects owe to the *Ecole des Beaux Arts.* It took Colbert and two hundred years to found the school; surely we may not despair if after a few decades we still have much to learn."

Current Activities

Meeting of the Sectional Committee of the American Engineering Standards Committee on Methods of Testing Wood at Madison, Wisconsin, 14 April. The Institute was represented at this meeting by Prof. Charles W. Killam. The meeting considered criticisms of a tentative standard for methods of testing sent out to interested and informed institutions and individuals. The purpose of the proposed standard is to insure, as soon as possible, that tests carried out in different laboratories will follow the carefully worked out methods based largely on those followed in the Forest Service, so that the results will be fairly comparable with the large number already on record there. Such standardization is particularly necessary in the case of a material like wood because of the great variation in different pieces due to moisture content, rate of growth, and defects.

In 1918 the American Society for Testing Materials adopted standard specifications for fire tests of materials and construction. These specifications were approved in 1919 as tentative American Standards by the American Engineering Standards Committee.

A meeting was held in New York City, 2 May, to organize a Sectional Committee for a study of the present specifications and to extend the scope of the standards to include specifications for fire tests of materials and structural units which constitute permanent integral parts of a finished building. The specifications as prepared to date cover only assembled materials and not units.

Pending the appointment of a representative, the Institute is co-operating through the Scientific Research Department.

Simplification of Elevated Steel Tanks on Towers: A conference was held in Washington, D. C., on 29 April under the auspices of the Division of Simplified Practice to consider certain aspects of the above subject. The Institute was represented by Mr. L. Justement.

At the present time there exists no well known specification covering the manufacture of elevated steel tanks on towers. It was the sense of the conference that because of the several engineering problems involved in tank and tower design the co-operation of the American En-

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gineering Standards Committee should be obtained in the development of standard specifications covering design, construction and installation.

Based upon a consideration of popular demand, it tentatively recommends that the recognized capacities of elevated steel towers be reduced to the following capacities in U. S. gallons: 5,000, 10,000, 15,000, 20,000, 25,000, 30,000, 40,000, 50,000, 60,000, 75,000, 100,000, 150,000, 200,000, 300,000, 500,000.

Committee Appointments

The personnel of a number of the Institute committees has already been selected, and the men appointed to these bodies have already signified their acceptance of their appointments.

The members of the new Executive Committee are as follows: D. Everett Waid, Edwin H. Brown, Abram Garfield, William L. Steele, and Charles Herrick Hammond.

The new Judiciary Committee is composed of Messrs. William L. Steele, *Chairman;* W. E. Fisher, and William J. Sayward.

The Board of Examiners—Messrs. Edward W. Donn, Jr., *Chairman;* Delos H. Smith, and Louis A. Simon—is the same group which has served for the past two years.

At the meeting of the Board of Directors, which followed the Convention, President Waid, in conference with the Board, decided to withhold the appointment of new Standing and Special Committees for the time being. This will give opportunity for mature consideration, which was not possible on the day following the Convention.

In the meantime the President and the Board are asking the present committee chairmen and members to continue to perform their respective duties.

Announcement of new appointments, or reappointments, will be made in due course.

Letters to the Editor

Modern German Architecture

To the Editor of the Journal:

Mr. Irving K. Pond is quite right in saying that some German architectural work has gone wild and is really cast-iron. No wonder! The war and post-war times in this country are well fit to create a thorough nervous breakdown of a great nation. Naturally the soul is irritated and will seek its way on twisted roads; however, I can assure Mr. Pond there is sanity still alive in the architectural world over here too. Therefore, it would seem "square" not only to reproduce the cast-iron trials but give the sane work a chance also—sane work which is struggling for economic and artistic solutions both.

Hans J. Philipp.

Itzehoe, Germany.

Obituary

Louis Holmes Boynton

Elected to the Institute in 1913
Died at Chicago, Ill., 19 April, 1924

Professor Louis Holmes Boynton, of the faculty of the College of Architecture of the University of Michigan, was born in 1867 at Guilford, Connecticut, and as a special student studied architecture at the Massachusetts Institute of Technology. Afterward he entered the office of Peabody and Stearns, in Boston, winning the Rotch Traveling Scholarship in Architecture in 1896, which gave him two years of study in Europe. Part of this time was spent in Italy where in 1897 he was married. After his return to the States he was for a time with Shepley, Rutan and Coolidge, Boston, and—later—McKim, Mead and White and Cass Gilbert, New York City. With Mr. Gilbert his principal work was on the Union Club and on the New York Customs House. From 1908 to 1912 he practiced in New York City, and then went to the University of Michigan, to teach in the field of architectural design, in which his training and experience on important undertakings was of great value. As a practitioner he was very active and has done some of Ann Arbor's most beautiful buildings including the new South University Avenue public school, residences and fraternity houses.

He is survived by Mrs. Boynton and three children, Louise, Lucia and George, and by three brothers.

Professor Boynton had been on the Board of Directors of the Ann Arbor Art Association since 1917, and was its president in 1920-21. His loss will be keenly felt by all who had the privilege of knowing him whether as a friend, associate or teacher.

William D. Hewitt, F. A. I. A.

Elected to Associate Membership in the Institute in 1901
Elected to Fellowship in 1909
Died at Philadelphia, Pa., 23 April, 1924

(Further notice later)

Booth Traveling Fellowship

The first award of the George C. Booth Traveling Fellowship in Architecture has been made by the College of Architecture of the University of Michigan. Of the nine competitors who finished, the designs of two were of such equal merit that the jury decided to divide the $1200 income of the Fellowship between Marion F. Blood, a member of the Class of 1924 and Ralph R. Calder who graduated in 1923. Both have had office experience in addition to academic training and both are students of high scholarship.

To the $600 received by each winner, Mr. Booth has generously added $500; by this gracious gift it thus becomes possible for the school to send two students abroad for a stay of approximately one year.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL *jointly to give in this division, each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus accord architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

Water Pipe Sizes for Plumbing Fixtures, Branches and Mains (29d) (*By Walter S. Timmis, Reprint from Journal of American Society of Heating and Ventilating Engineers.*) (Continued from page 300, June issue.)

TABLE 6. SHOWING WATER PRESSURE REQUIRED TO DELIVER WATER TO TOP OF VERTICAL RISER WITH 15 LB. PRESSURE AT THE TOP BRANCH

Vertical rise of water from main to highest fixture branch	Static head in lb. per sq. in.	Water pressure in lbs. required to deliver water to top of riser with 15 lb. terminal pressure			
		Pressure drop per 100 ft.			
		5 lb.	7 lb.	10 lb.	20 lb.
0	0	15	15	15	15
10	4.33	20.5	20.7	21	22
20	8.66	25	25.4	26	28
30	12.99	29.5	30.1	31	34
40	17.32	35	35.8	37	41
50	21.65	39.5	40.5	42	47
60	25.99	44	45.2	47	53
70	30.32	49.5	50.9	53	60
80	34.65	54	55.6	58	64
90	38.98	58.5	60.3	63	72
100	43.31	64	66	69	79
110	47.64	68.5	70.7	74	85
120	51.97	73	75.4	79	91
130	56.30	77.5	80.1	84	97
140	60.63	83	85.9	90	104
150	64.96	87.5	90.5	95	110

NOTE: The water pressures given in above tables are the pressures at the base of the riser, necessary to deliver water to top of riser with a terminal pressure of 15 lb., when discharging the number of gallons per minute called for in Table 5, at the pressure drop indicated.

The following examples will be given, using Table 5:

EXAMPLE: What are the sizes required for mains and branches in a building 100 ft. high, supplied with a water pressure of 75 lbs. per sq. in. with 100 gal. of water per minute required on each floor?

This is worked out in Table 3 and gives the pipe sizes for the main riser with a 10 lb. drop for 100 ft. of run and shows that a 3 in. main, reduced to 2 in., would be required: branches to the various groups of fixtures can be taken from Table 5, from which it will be seen that on the top floor it will be necessary to use a 1½ in. branch to carry 75 gal. per min. with a pressure drop of 30 lb. but that at 50 ft. vertically from the supply, a 1¼ in. branch pipe will carry 74 gal. per minute, therefore 1¼ in. pipe could be selected for this branch. Assuming that the pressure drop in the main riser is 10 lb. per 100 ft. run and the pressure drop on the 100 ft. as given in column 2 of Table 5 is 43.31 lb., making a total of 58.31 lb.; it will be seen that 75 lb.—58.31 lb., which equals 16.59 lb., is the amount of pressure over and above that required, and that this pressure can be utilized to overcome the friction drop in the main feed line running from the source of supply to the base of the riser.

From Table 3 it is found that 240 gal. per min. will flow at the first floor, and assuming that this water supply is to be brought in a main 300 ft. long, the table of 5 lb. drop of Table 6 may be used, which will show that a 3½ in. supply would be necessary.

Table 2 is a condensed form of Table 1, omitting the number of gallons per fixture, carrying the number of fixtures from 1 to 16.

Table 3 gives a method for computing the sizes of mains and risers and the pipe sizes given are based upon a pressure drop in the main riser of 10 lb. per 100 ft. of run; other values such as 5 lb. or 7 lb. can be used from Table 5 if it is found advisable on account of very long runs.

It will be seen that 60 per cent of the total amount of water required for all the fixtures on any floor is given as the factor of use and that a further reduction is made by deducting 10 per cent on each floor below the top floor until 40 per cent is reached. This of course is a matter of judgment and experience, but the volume of flow will be adequate for the average case, provided the pipe sizes selected are ample for the drop in pressure admissible.

WHEN TANK IS ON ROOF

If tank is elevated about 35 ft. above highest fixture, which would be about 25 ft. above the roof, all the computations given herein will apply for branch connections and main risers except that the main riser will have its greatest diameter at the top. It will be seen that 35 ft. elevation will give the necessary 15 lb. pressure at the highest fixture.

FRICTION IN ELBOWS

Friction caused by elbows should be added to straight pipe friction. Each elbow in a line will add friction equal to a length of straight pipe at forty times the diameter of the pipe approximately as follows:

Pipe size	¾	1	1¼	1½	2	2½	3	3½	4
Equivalent length of straight pipe in ft.	2.5	3.3	4.1	5	5	8.3	10	11.7	13.3

The pressure loss due to friction in the main leading to base of riser can readily be added to the pressure required at the base of a riser, thus:

Required—the size of riser and main for a 10-story building 100 ft. high where the water use per floor as given by Table 1 for fixtures aggregates 100 gal. per floor.

The computations as given in Table 3 show that the water flow required on the various floors is as follows:

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TABLE 7. GIVING EXAMPLE OF RISER SIZES FOR DIFFERENT PRESSURE DROPS PER 100 FT. RUN

Floor	Gal. per min.	5 lb.	7 lb.	10 lb.	20 lb.
10	60	2	2	2	1½
9	108	2½	2½	2½	1½
8	144	3	3	2½	2
7	168	3½	3	3	2½
6	180	3½	3	3	2½
5	180	3½	3	3	2½
4	184	3½	3	3	2½
3	192	3½	3	3	2½
2	216	3½	3	3	2½
1	240	3½	3½	3	2½

If the system of mains and risers is based upon 10 lb. pressure drop per 100 ft. run, the pressure required at base of riser when water is flowing will be 69 lb., see Table 6 at 100 ft. height; or at 20 lb. drop it would be 79 lb., while at 5 lb. drop it would only be 64 lb.

Pressure required at the main 100 ft. away with 10 lb. drop per 100 ft. would be $69 + 10 = 79$ lb., or 50 ft. away $69 + 5 = 74$ lb.

WATER SUPPLY FORMULA

CF = Cu. ft. per min. discharged
G = Gal. per min. discharged
H = Friction head of water in feet = pressure × 2.31; if water is raised vertically, deduct number of feet raised, from head due to pressure
L = Length of pipe in feet, including horizontal and vertical runs.

$$CF = 0.16 \sqrt{\frac{(3d)^5 \times 3\ H}{L}} \qquad (1)$$

$$G = 1.2 \sqrt{\frac{(3d)^5 \times 3\ H}{L}} \qquad (2)$$

$$H = \frac{(0.16 \times CF)^2 \times L}{(3d)^5} \qquad (3)$$

$$H = \frac{(1.2\ G)^2 \times L}{(3d)^5} \qquad (4)$$

The above formulæ neglect the head due to entry, which need not be computed except when L is very short.

H_1 = head due to entry in feet

$$H_1 = \frac{(0.83\ G)\ 2}{(d^2 \times 13)} \qquad \text{or } H_1 = \frac{(0.16\ CF)\ 2}{(d^2 \times 13)}$$

Example—

Required the discharge of a 2 in. main with pressure 30 lb. 100 ft. horizontal run and 30 ft. vertical run.

$$H = 30 \times 2.31 - 30 = 39.3$$

Formula (2) $$G = 1.2 \sqrt{\frac{(3 \times 2)^5 \times 3 \times 39.3}{100 \times 30}} = 100.8$$

In the above case the head due to entry would be

$$H_1 = \frac{(0.83 \times 100.8)\ 2}{(2 \times 2 \times 13)} = 2.56 \text{ ft.}$$

Usually this can be neglected except for very close calculations.

Poultry Houses (351) (*U. S. Department of Agriculture, Farmers' Bulletin No. 1113, by Alfred R. Lee*). Poultry houses should be dry, well ventilated, free from drafts, with plenty of sunshine and room enough to allow the birds to move about with freedom and comfort. These factors are more important than the kind or style of building used. No fixed type of building can be recommended as superior to all others if proper ventilation, light and other essentials referred to are provided.

The houses should be located if possible on high or sloping ground and always on dry and well-drained soil. The house should face the south, as it gives more sunlight for a longer part of the day, especially in winter, when sunlight is necessary for the comfort of the birds. The proper dimensions of a poultry house depend both on the number of fowls and the locality. On a farm or where the birds can be out of doors nearly every day in the year, about 2½ square feet of floor space per bird in flocks of 20 is enough, but in a village or city or in a climate where there is a good deal of snow, making it necessary to confine the birds closely, 4 or 5 square feet per bird should be allowed.

Floors. Poultry houses may be built with or without floors. In either case they should be dry. Dampness is fatal to both fowls and chicks. If the house is on dry sandy soil, a dirt floor is usually quite satisfactory, but as a rule it is more damp than board or cement floors. If board floors are used they should be both tight and smooth so as to make them dry and easy to clean. If possible they should be 8 or 10 inches from the ground to allow a circulation of air and to prevent rats from harboring under them. Cement floors, especially for large houses, are quite satisfactory.

Roosts. Roosts should always be placed at the back of the house away from windows or openings. Dropping boards should be built about 2 feet or 2 feet 6 inches from the floor (never more than 2 feet 6 inches). The roosts should be about 8 inches above the dropping boards and 15 inches apart. From 8 to 10 inches of roosting space should be allowed for each hen. The roosts should be hinged to the back wall so that they may be raised and both the roosts and dropping boards cleaned. Roosts should never be built one above the other, but should all be of the same height.

Nests. There should be a nest for every 4 hens. Nests should be at least 15 inches square and may be built singly or in rows and fastened to the side of the building or placed under the dropping boards. If possible, however, nests should be somewhat secluded or darkened as hens will seek such nests more readily.

Homemade Silos (351) (*U. S. Department of Agriculture, Farmers' Bulletin 855, by Helmer Rabild and K. E. Parks. Revised August, 1922. Size, 6" x 9". Pages, 55. Illustrated*). This bulletin describes the essential features and construction of four common types of silos.

Commercial Garages (35m) (*Concrete Commercial Garages, Portland Cement Association. Size 6" x 9", pages 19, illustrated*). Synopsis: Favorable insurance rates for fireproof construction, economies from other sources, features of commercial garage design, some building code requirements.

Standardizing Schools (35z19) (*Regulations for Standardizing the Common Schools, issued by the Department of Public Instruction, Des Moines, Iowa. Pages 20, size 6" x 9"*). An official rating card is issued for Iowa schools, and in order to become standardized a rural school must have a rating of 80 per cent from this score card for the first year, 85 per cent the second year, and 90 per cent for every year thereafter.

This booklet describes the requirements which must be met in connection with grounds and outbuildings; the school house; equipment and care of the schoolroom; library and supplementary readers; the teacher and the school and community activities.

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The Cathedral Church of Christ

IN THIS issue we are able to present nine illustrations of one of the very greatest of modern architectural achievements. It is needless to say that in the time to come the building will be subject to the careful criticism which it so well deserves and, as is inevitable in the history of architecture, Time will finally set its seal. In the meantime we can think of nothing better than to reprint one of the contemporary newspaper articles which have appeared in the English press, for it is both an excellent account of the inception and consummation of the structure, as well as a fine example of the dignity and scholarship with which an event of this kind is treated by English journalists. We, therefore, quote as follows from the London *Daily Telegraph* of 24 June, 1924:

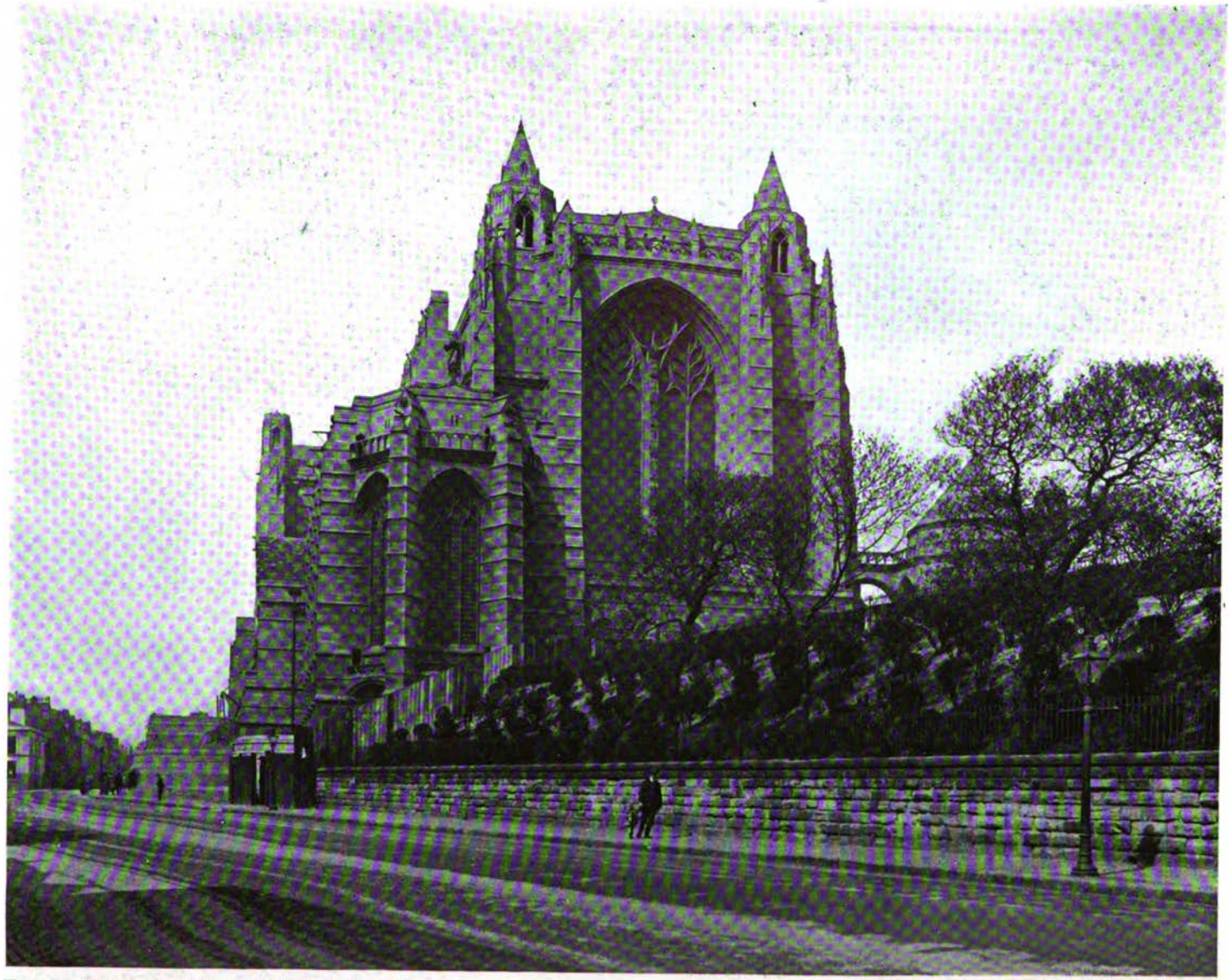
The Cathedral Church of Christ in St. James' Mount, Liverpool, to be consecrated on 19 July in the presence of the King and Queen, is a triumphant justification of all the painfully imitative efforts we associate with the Gothic revival. It is a far cry from the Churchwarden Gothic of the middle years of the nineteenth century to the nobility of Liverpool Cathedral. But the two are not unrelated. The one is the travail, the other the birth—the deliverance from blind bondage, to a new life, free, independent, and beautiful.

Liverpool Cathedral marks an epoch in English architecture. When completed the great church, inferior in size only to St. Peter's, Rome, and Seville Cathedral, will be something more than the finest example of modern Gothic. It is Gothic not in the sense of gathering and using dead styles, but in the spirit which informs it. It is the living expression of a genius of our own age and owes no more to the past than do the original conception and execution of the artist of any age. And in speaking of the Cathedral as Gothic one must do so with the reservation that the bones, as it were, of the composition, are Classic. For example, the church is symmetrical, not only about its longitudinal axis, but about its transverse axis also—with the exception, that is, of the Lady Chapel and the Chapter House, which stand at the eastern extremity. Moreover, the main lines are simple and bold, as befits a building which will be principally seen as a whole from a distance, in this case from the Mersey. Detail not called for by structural necessity has, in the main, been avoided, and the cathedral seen from the river will be a masterly arrangement of masses, cast shadows, and vertical lines. Perhaps the first thing to strike the observer surveying the exterior is that the cathedral has no clerestory. The great choir vault is supported by huge buttresses, through which the aisles seem, when you enter, to be tunnelled.

21-Year-Old Designer

Before, however, considering the details of the structure, it may be worth while to recall the circumstances in which the building of the Cathedral began. The erection of a cathedral for the diocese (created in 1880) was authorized by Act of Parliament in 1885, and the designs of Sir William Emerson for a Gothic building with a large dome were accepted. But various difficulties arose, and the project was abandoned. In 1900, Dr. Chavasse succeeded to the See, and the idea was revived, a further Act of Parliament obtained in 1902, and in the year following £10,000 paid to the Corporation of Liverpool for the present site of twenty-two acres. In the meantime, steps had been taken by public invitation towards selecting an architect. Mr. G. F. Bodley, R.A., and Mr. Norman Shaw, R.A., had been appointed advisory architects. When ultimately the competitive designs were examined there was no difficulty of choice, for there was one which left all the others laggard runners. It fulfilled all the conditions of original conception, of fine and noble proportions, combined with an evident knowledge of detail, and, most important, that power, combined with beauty, that makes a great and noble building. With such considerations in mind the advisory architects gave first place to the drawings which, when the envelope revealing the identity of the architect was opened, showed them to be by a young man of 21, Mr. G. Gilbert Scott. This discovery of youth, together with the fact that Mr. Scott was a Roman Catholic, put the committee in a difficulty. Orangemen were a force to be reckoned with in Liverpool, and youth in such an enterprise meant lack of experience. Some of the committee were for inviting further designs in a new competition, but Sir Douglas Horsfall came to the rescue with sound counsel, and the situa-

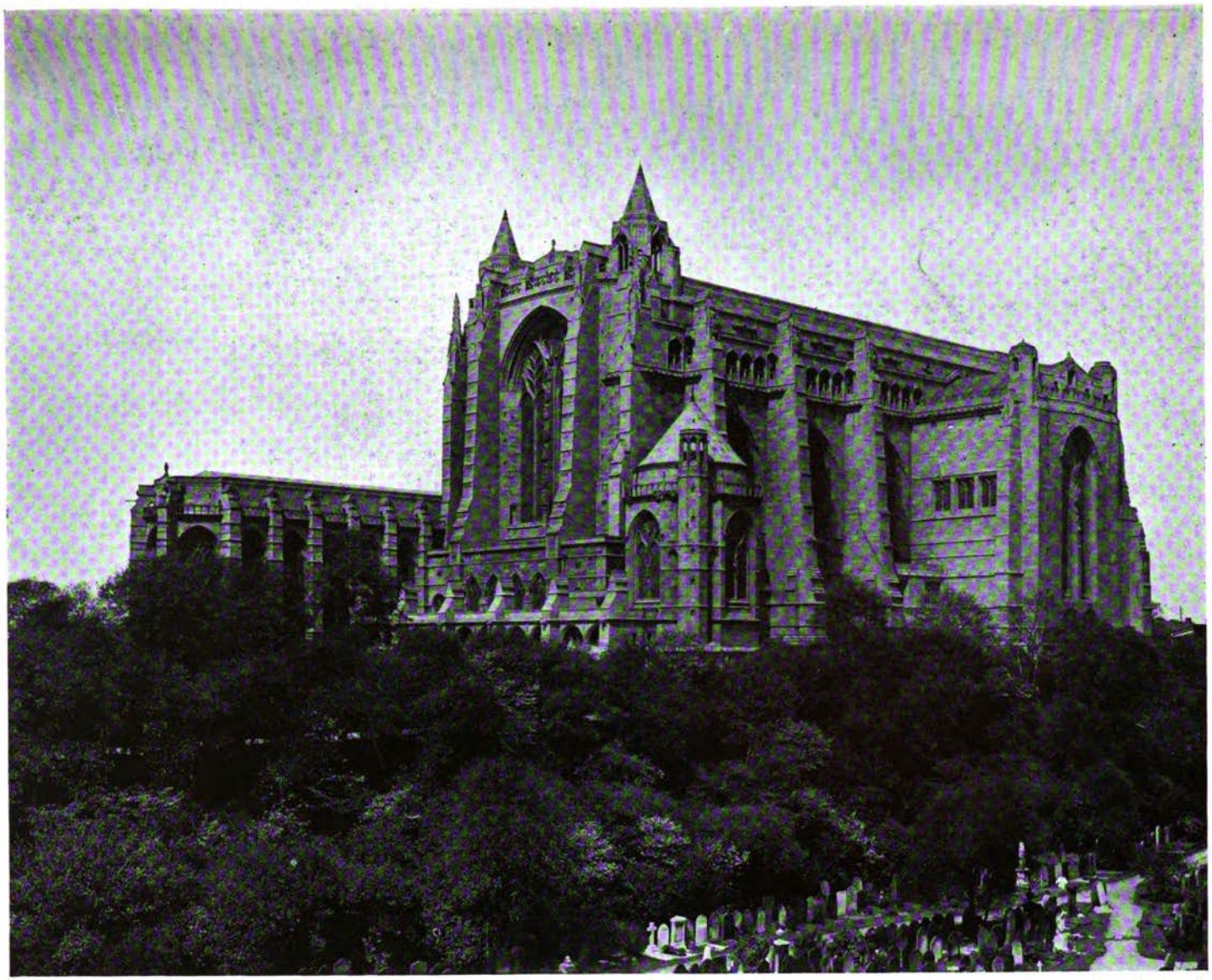
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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
EAST END OF THE CATHEDRAL AND LADY CHAPEL
G. GILBERT SCOTT, *Architect*

Stewart Bale, Liverpool

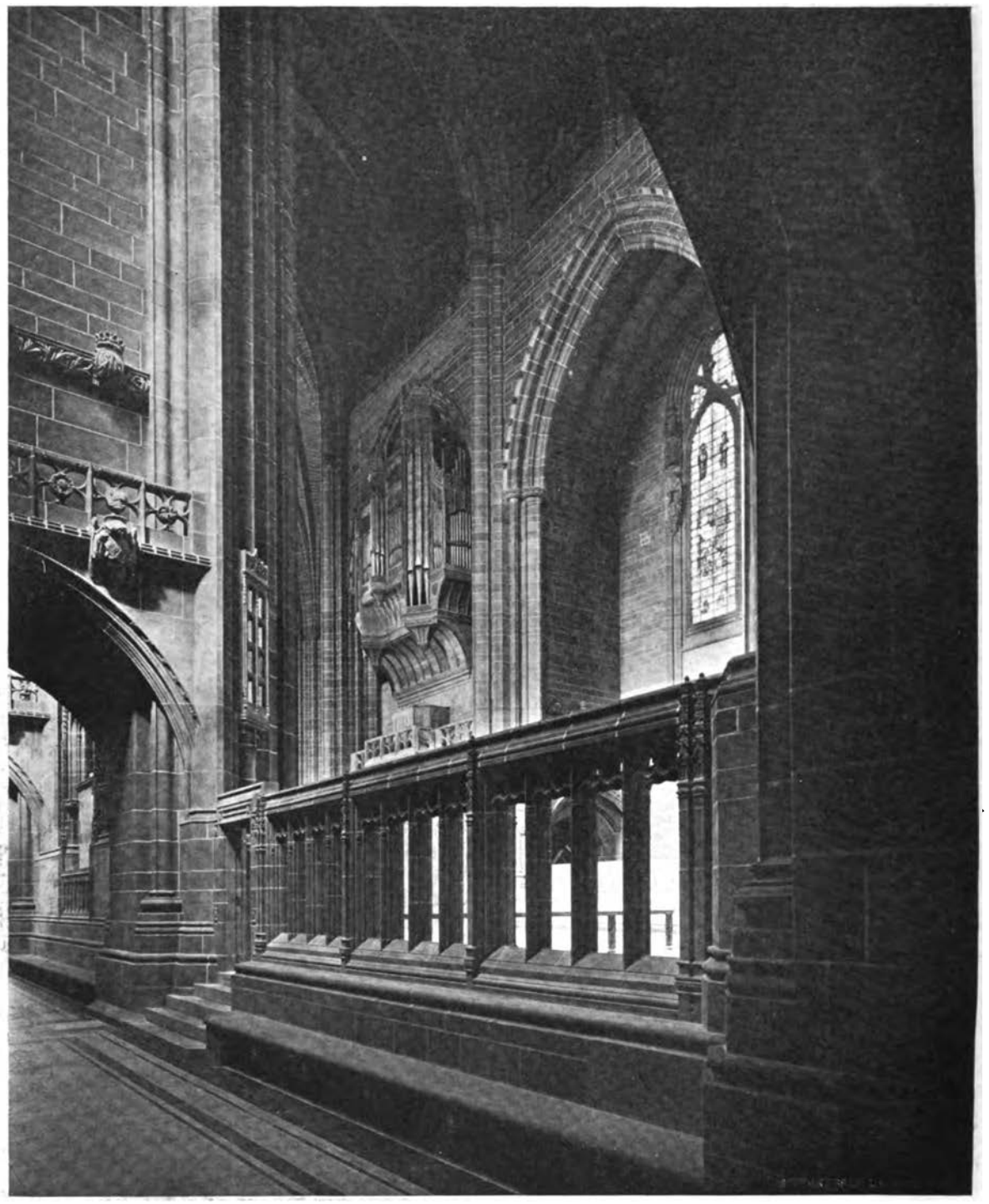
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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
VIEW OF THE CATHEDRAL FROM THE
NORTH EAST ACROSS ST. JAMES' CEMETERY
G. GILBERT SCOTT, *Architect*

Stewart Bale, Liverpool

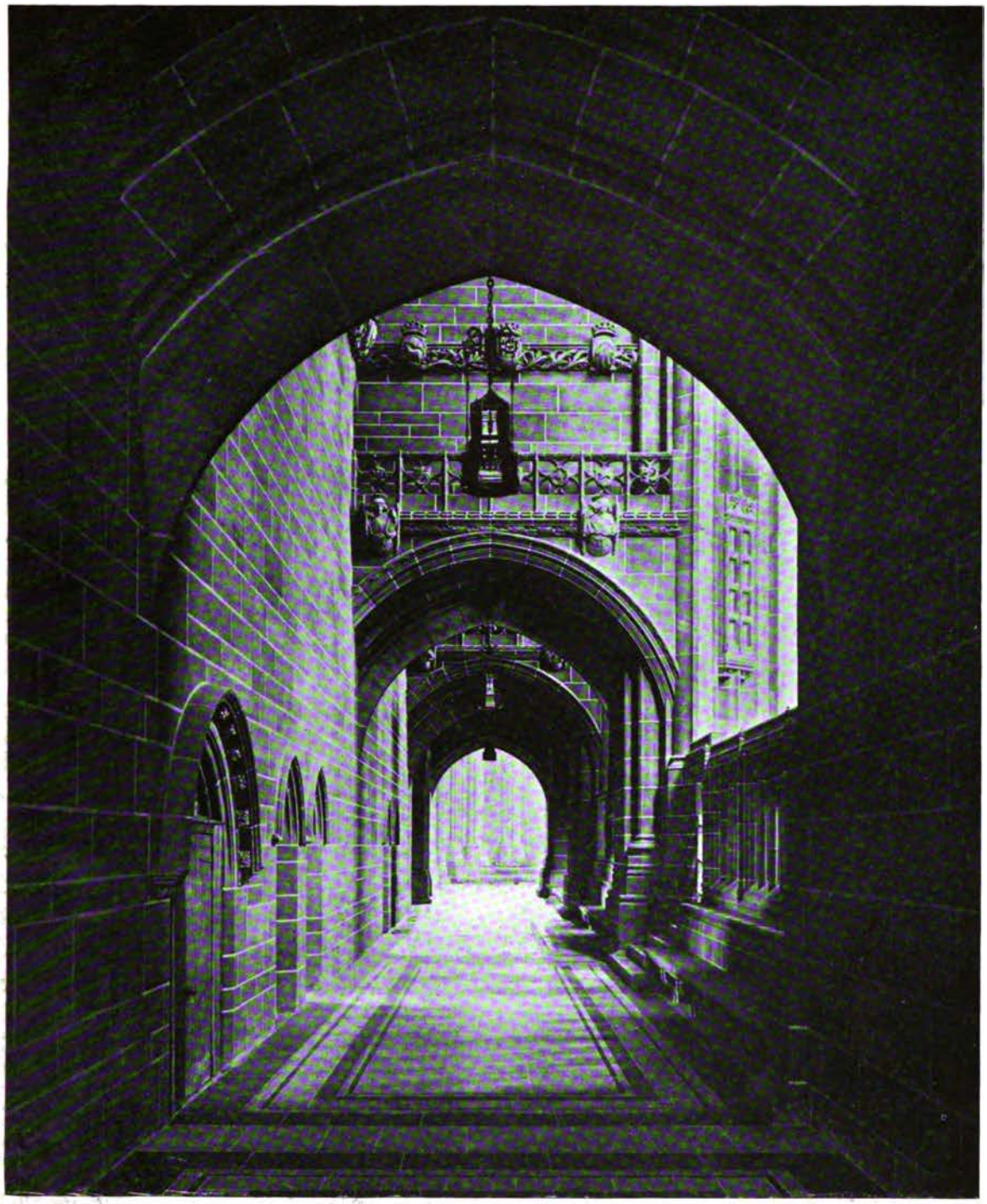
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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
VIEW FROM SOUTH CHOIR AISLE
G. GILBERT SCOTT, *Architect*

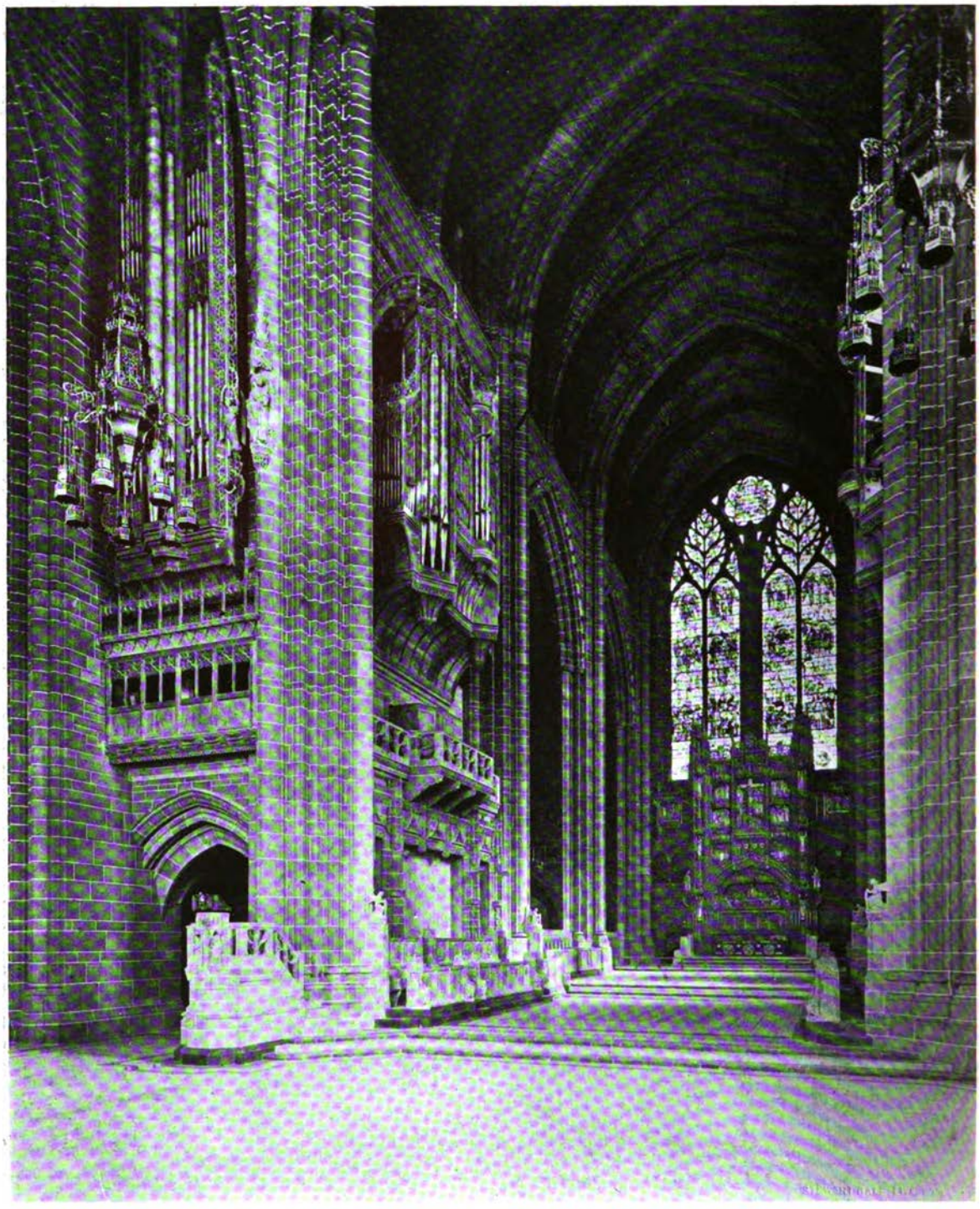
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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
SOUTH CHOIR AISLE
G. GILBERT SCOTT, *Architect*

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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
THE CHOIR—LOOKING EAST
G. GILBERT SCOTT, *Architect*

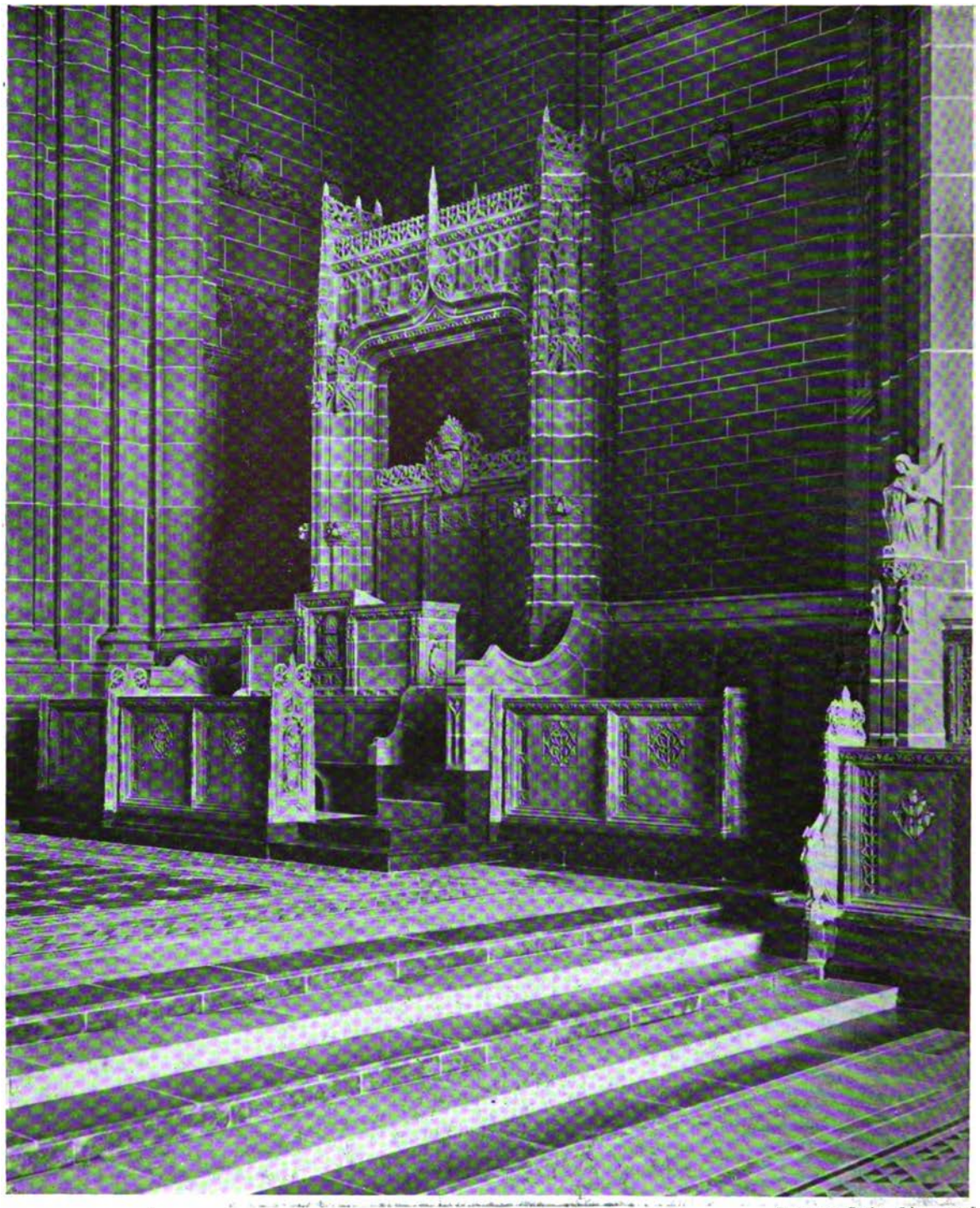
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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
VIEW FROM SOUTH EAST TRANSEPT
G. GILBERT SCOTT, *Architect*

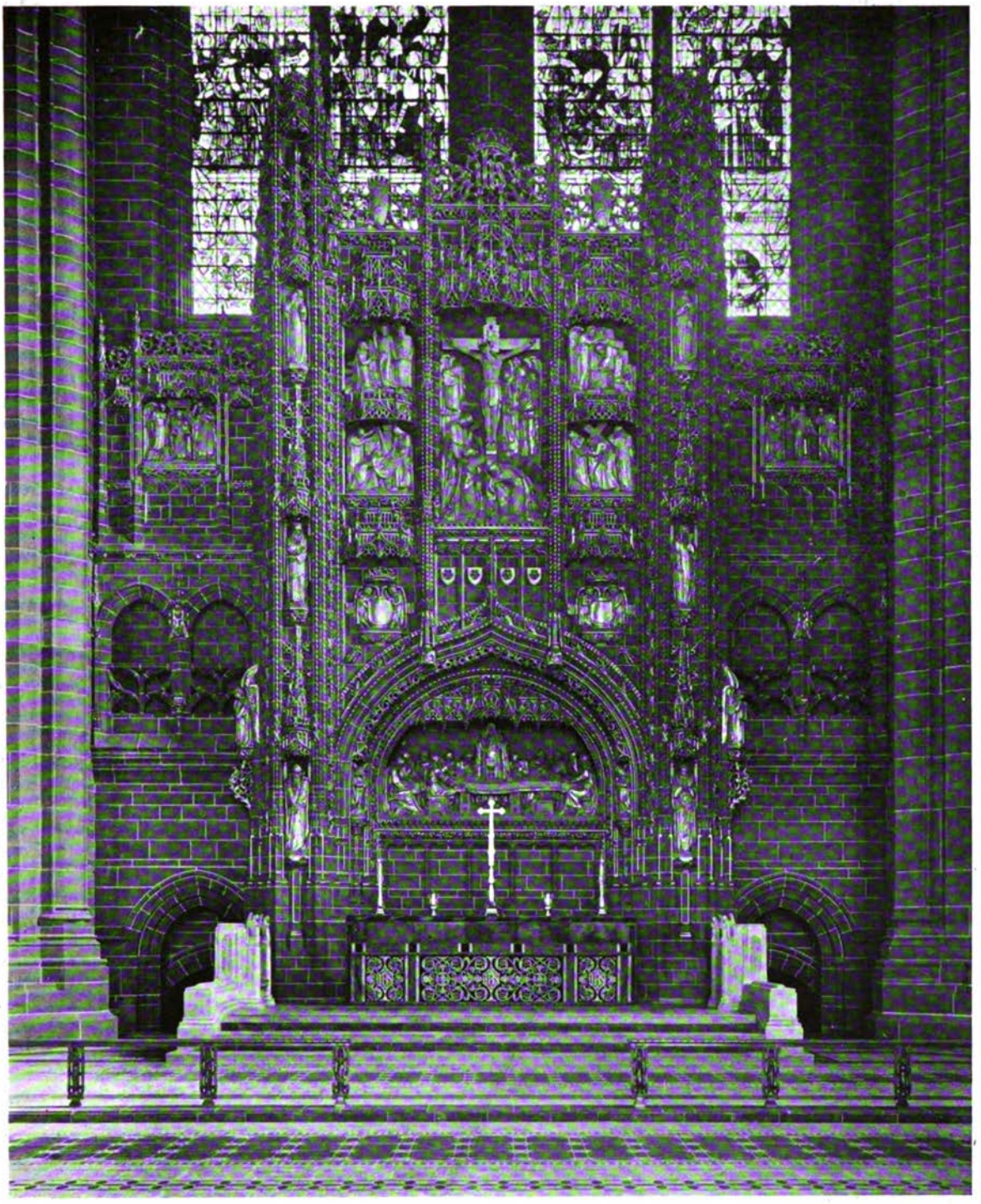
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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
THE BISHOP'S THRONE
G. GILBERT SCOTT, *Architect*

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THE CATHEDRAL CHURCH OF CHRIST—LIVERPOOL
THE REREDOS
G. GILBERT SCOTT, *Architect*

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tion was saved by appointing Mr. Bodley as joint architect, in order that his long experience might reassure the public. But for all that Mr. Bodley's name stood first, it is Scott's cathedral. The gathering of funds was greatly helped by the completion in 1910 of the Lady Chapel. Any doubts that may have lingered were resolved, for here was a building, complete in every detail, which commanded universal admiration.

The Plan

The plan for the Cathedral proper provides for a choir and nave, each of three bays and of equal length. Between them and beneath the tower is what is called the Central Space. This is a square, the sides of which are equal to the full width of the building. Flanking it are two pairs of transepts of equal length linked by great arches. The completed portion of the building includes the two easternmost transepts. There is then more than half the building remaining to be completed, for between the transepts there are to be the great north and south porches, that on the south being approached by a magnificent flight of steps over 200 feet wide.

The first impression on entering by the temporary door at the west end is of height. From the floor to the highest point in the roof the distance is 116 feet, or 14 feet greater than in Westminster Abbey and 17 feet greater than in York Minster. The rosy tint of the local sandstone used in construction gives at once an appearance of warmth, which to some extent compensates for the austerity of the design. The choir is of two stages—arcade and triforium—the triforium gallery being of the same width as the aisles, which are intended solely as communicating corridors. The three bays of the choir are divided by piers, and the triforium consists of six principal arches, two in each bay. The vaults, it may be worth remarking, derive their stability entirely from their design, there being no concealed iron or steel-work anywhere in their construction. The exterior roof, on the other hand (which is some 20 feet above the inner roof), is constructed throughout of ferro concrete. The floor of the choir is of marble, and on either side, on a basis of black marble, are stalls for the clergy and singers. On the south side is the Bishop's throne, and in common with all else, it has been treated as an integral part of the building and not as mere accidental furnishing. Indeed, it is true to say that every smallest detail in the Cathedral has the unity which comes from its receiving the impress of a single mind.

The sanctuary is separated from the choir by shallow steps surmounted by altar rails of bronze. These, though plain in outline, are of great delicacy, for each of the ten supporting uprights has been sculptured to symbolize one of the Ten Commandments. The culminating point of the whole design is the reredos, depicting in its principal features the Last Supper and the Crucifixion. To avoid flatness the details of the reredos have been picked out in gold. Below the reredos is a gradine of black marble, before which stands the altar, plainly wrought in wood and to be covered by embroidered frontals.

When all has been so nobly planned, one hesitates to sound a note of criticism. But it is difficult to avoid a feeling of disappointment as one looks at the sanctuary. In the first place, the altar seems too low, but since the predella, or top steps, upon which it stands is some nine or ten feet wide, it may be that the architect had intended a further range of steps. The fact that the gradine of the altar does not rise to fit the lower extremity of the reredos confirms one's suspicions of a modified plan. Secondly, staircases lead from the sanctuary through the east wall on either side of the altar. They seem scarcely justified by necessity, but if they were they might have been made less obtrusive. As it is, the arches look at a distance like dark caverns. Another point is the placing of the sedilia and credence. These are of white marble and in their detail are very beautiful indeed. Seen, however, from the Central Space they appear as two white blocks very close to either end of the altar and of a height with it. The result is a feeling of constriction which does not at all harmonize with the glorious spaces and great freedom of the rest of the building. The sedilia, moreover, will accommodate but one person, and there is little or no space near it for moveable stools or benches.

The northeastern transept is Liverpool's monument to her sons who fell in the war. It forms a memorial chapel, and, but for the great expense, would have been separated from the main body of the Cathedral by a bronze grille, after the model of a Spanish Reja. However, it contains an altar, reredos, and cenotaph with an illuminated roll of honor. The altar is set against the north wall, and the reredos is a restrained and beautiful piece of work in marble and copper. On either side of the reredos, some ten feet from the ground, are two nearly life-sized figures of a soldier and a sailor. The altar is carved and lacquered, and it is intended to be used without frontals. In the transept will hang the colors of the 11th, 12th, 13th, and 14th Service and 1st Garrison Battalions of the King's (Liverpool) Regiment, together with ensigns of the Royal Navy, Royal Navy Reserve, and Mercantile Marine. In the opposite transept is to be placed the memorial to the 55th Division. The chief feature of the memorial, which is an integral part of the building, is a winged archangel holding a crown above a cross, and kneeling at his feet a soldier grasping the base of the cross. Beneath the memorial is the motto of the division, "They win or die who wear the Rose of Lancaster." By an unfortunate blunder the roses actually carved are Yorkist roses, but no doubt the mistake can be rectified. At present the figure described is standing in the mason's yard, and there is a danger that it will not be in place by 19 July, owing to the masons' strike. Perhaps the men of the 55th Division will see to it that the necessary work is done—voluntarily, if need be—before the King's coming to the consecration. In this transept, also, will be placed an altar tomb to the sixteenth Earl of Derby, one of the founders of the Cathedral.

Modern "Saints" in Windows

In the building of Liverpool Cathedral the committee had the obvious alternatives of completing the structure and leaving to future generations the work of furnishing and decoration (that was the course followed with Westminster Cathedral), or of completing each section in every detail. They chose the latter, with the result that, so far as it has gone, no smallest detail is lacking. If you wanted

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to give a book-marker you could not do so. Everything, whether of utility or decoration, is provided. And of these features the most arresting are the windows. That of the east end is of two pairs of lights, and illustrates the "Te Deum." In a large circle at the top is seated the figure of Christ in majesty; at the top of each of the four lights is an archangel—St. Raphael, St. Michael, St. Gabriel, and St. Uriel. Below them are representatives of the Glorious Company of the Apostles, the Goodly Fellowship of the Prophets, the Noble Army of Martyrs, and the Holy Church throughout the World. The selection of figures for the first light left no question of choice. In the others, however, there is a most interesting inclusion of modern people. Thus, among the prophets are shown John Wesley and John Keble, and among the martyrs Bishop Hanington, the C.M.S. missionary who was slain by order of Mwanga, King of Uganda, 29 October, 1885. In the fourth light, representing the Church, each figure typifies some activity of man. Thus, as a type of Christian musician we have J. S. Bach, a Christian soldier in Lord Roberts, a Christian lawyer in Sir Mathew Hale. The details of the window are not easy to make out from a distance, but the general effect of color is extremely good. All the windows perform their primary function of admitting light, and on the whole may be accounted highly satisfactory.

The organ is notable, not only for being the largest cathedral organ in the world, but for the new ideas in construction which it embodies. It has five manuals and 168 speaking stops. It is in two parts, one on either side of the choir, and has been built by Willis. It is the gift of Mrs. James Barron, who also bequeathed an endowment fund adequate to provide for its maintenance.

An important innovation is the method of lighting. On the eastward side of each of the piers of the choir there has been let into the fabric a set of six lights, with reflectors of the sort used in lighthouses. The effect is an even distribution of light, with nothing to catch the eye of the worshipper.

Finance and the Future

So far the Cathedral has cost £722,518, and even should it need another £1,000,000 to complete, that sum is no more than the equivalent in terms of modern value of the 40,000 marks (£26,666 13s 4d) which it cost to build Salisbury Cathedral. In those days the money was gathered from all over England by the prebendaries, but that for Liverpool has come mainly out of the diocese. The largest benefaction was that bequeathed by the late Mr. J. H. Welsford, amounting to £222,943 18s 8d. The time taken over the remaining sections depends chiefly on the supply of funds. From a constructional point of view they could be completed in fifteen to twenty years. The next section, the central space and western transepts, could be built in six or seven years.

No account of the Cathedral would be complete without mention of the embroidery executed by a guild of ladies. They have made all the linen and frontals, and though some of the latter are likely to appear "spotty" at a great distance, there is no doubt of the beauty of the work. The exquisite silver cross for the altar stands over six feet in height, and with the accompanying candlesticks and flower bases it is the work of Mr. W. Bainbridge Reynolds.

The following are the principal dimensions of the Cathedral. Heights are measured from floor level, and other measurements taken between walls, or from arch center to arch center:

Exterior Measurements	Feet
Length of main building (excluding buttresses)	558
The Lady Chapel projects a further	61
Making a total over-all length	619
Height of Central Tower	342
Height of Main Roof	138
Interior Measurements	
Length of Nave (including Narthex)	143
Length of Central Space	201
Length of Choir	138
Total length from West Door to Reredos	482
Length of Lady Chapel	120
Width across Transepts (the Transepts are 52 feet square)	197
Width across Choir and Choir Aisles, and Nave and Nave Aisles	87
Width of Aisles	13½
Width of Lady Chapel	33½
Height of Choir Vault	116
Height of Vault to Central Space	167
Height of Lady Chapel Vault	58

If comparison is made between the above figures and those of other cathedrals, the fact that the central space virtually, though not in name, forms part of the nave, should be taken into account.

The Chapter House, which lies to the northeast of the choir, is on a smaller scale than mediæval chapter houses, owing to the smallness of modern chapters. It is octagonal in form and is surmounted by a conical roof of copper. It was given by Freemasons of the Province of West Lancashire, in memory of the First Earl of Lathom, who is depicted in a memorial window.

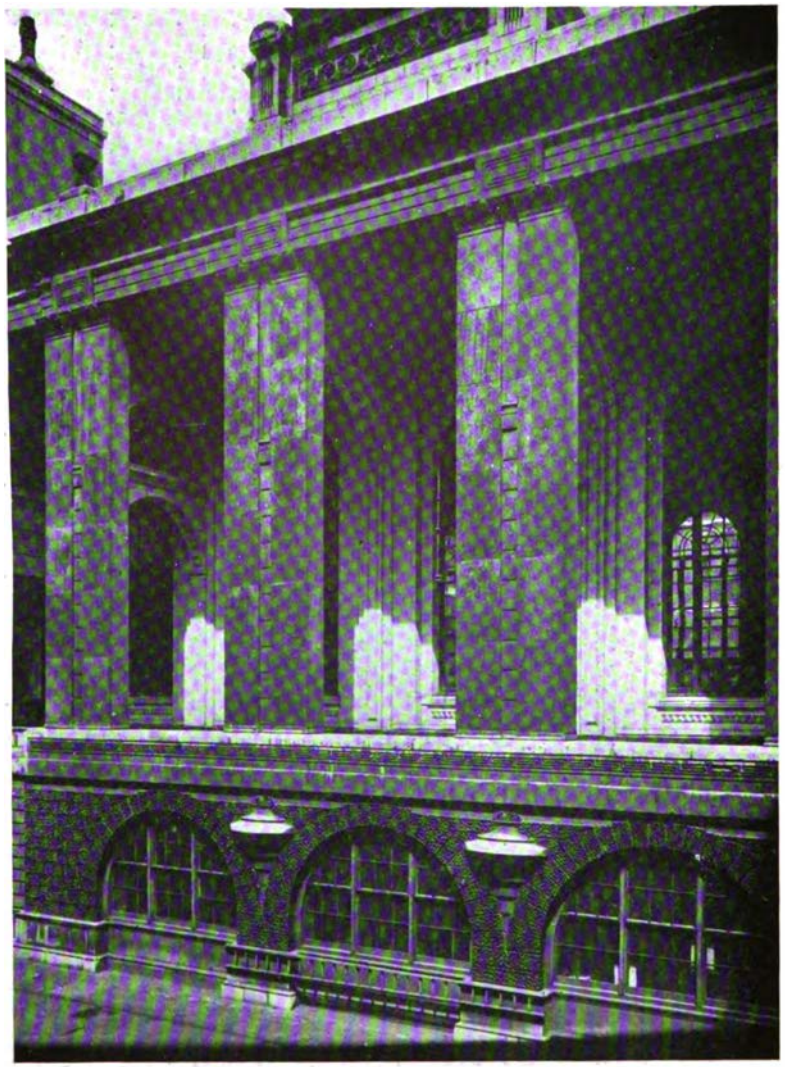
When Mr. Scott was elected an R.A. he deposited a drawing of the Cathedral in the diploma gallery, and in this one may perceive one of the chief beauties of the building, the occasional glimpse through low arches of soaring lines rushing upward to an unseen vault.

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BANK OF ENGLAND
VIEW ACROSS LOTHBURY COURT
FROM END OF RESIDENTS' COURSE
SIR JOHN SOANE, *Architect*

F. R. Yerbury



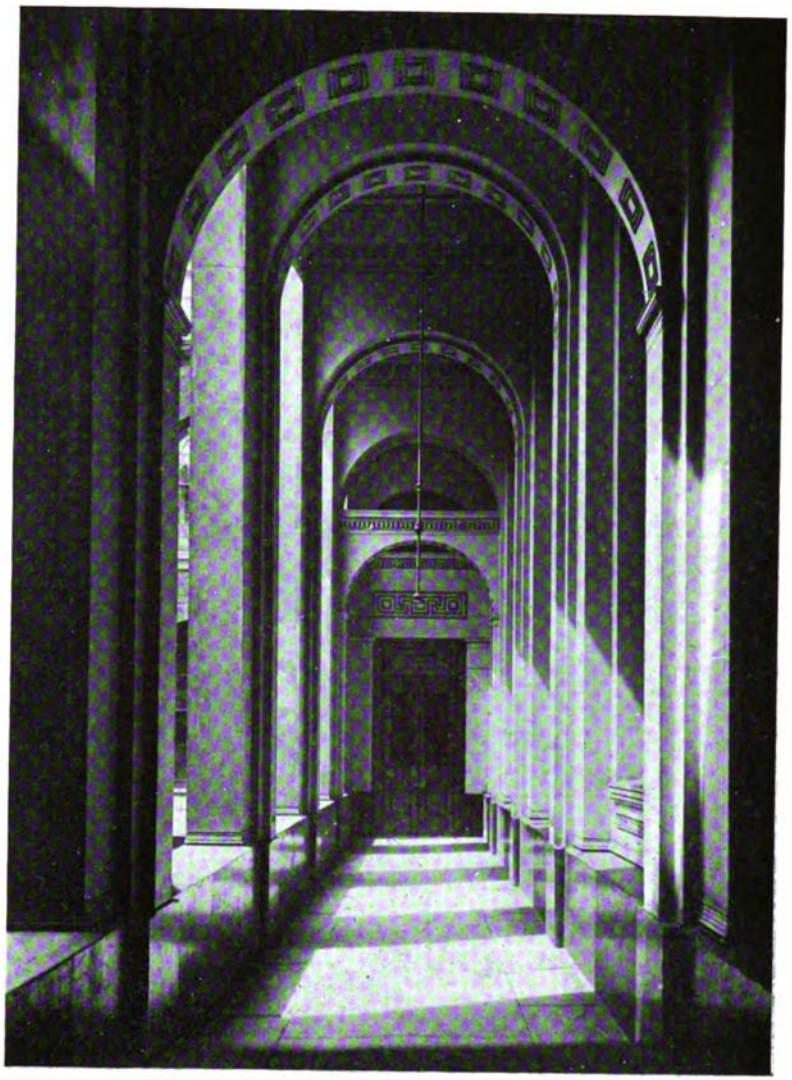
BANK OF ENGLAND
LOGGIA IN THE GOVERNOR'S COURT
SIR JOHN SOANE, *Architect*

F. R. Yerbury

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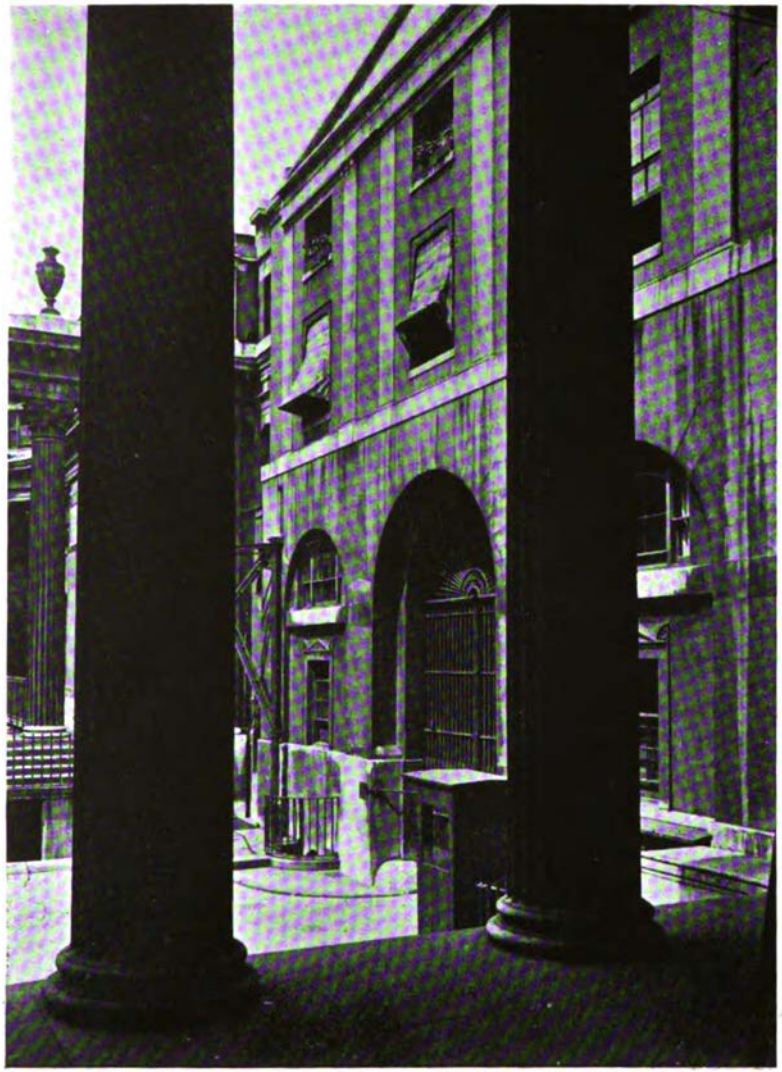


BANK OF ENGLAND — *F. R. Yerbury*
SCREEN WALLS TO RIGHT AND LEFT OF THE OUTER COURTYARD
SIR ROBERT TAYLOR, *Architect*



BANK OF ENGLAND — *F. R. Yerbury*
VIEW INSIDE THE GOVERNOR'S COURT LOGGIA
SIR JOHN SOANE, *Architect*

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BANK OF ENGLAND — *F. R. Yerbury*
OFFICE AT THE BANK, LOTHBURY COURT (1796)
SIR JOHN SOANE, *Architect*



BANK OF ENGLAND — *F. R. Yerbury*
A COURTYARD
SIR JOHN SOANE, *Architect*

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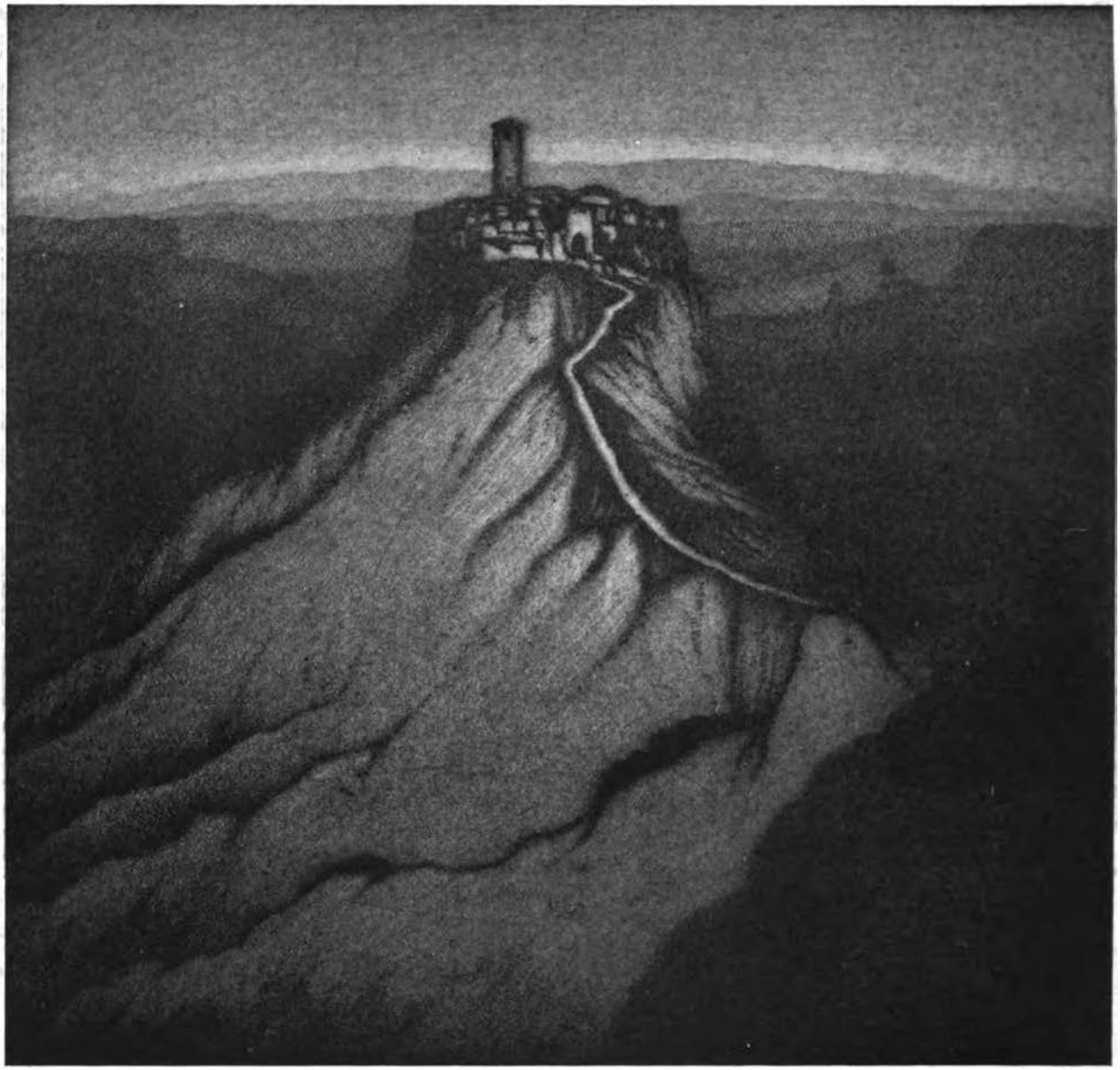


Two Etchings

CELESTINO-CELESTINI

PORTA BORGNA—PERUGIA

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CIVITA DI BAGNOREA
CELESTINO—CELESTINI

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The Teaching of Architecture in the United States[1]

In Connection With a Short History of the Ecole Des Beaux-Arts

I. The Ecole des Beaux-Arts

THE ECOLE DES BEAUX-ARTS and the Prix de Rome have interesting histories, very valuable in explaining the reasons that have brought about their evolutions. Both had many problems to solve. How did those institutions originate? How did they reach the level they have attained? What were their aims? What are the aims of the schools teaching Architecture in the United States today? Under what conditions is Architecture taught? What is the result? What should be done?

The French Academy of Architecture was founded in 1671 by Colbert, 25 years after the creation of the Academies of Painting and Sculpture founded by Mazarin under the direction of Charles Le Brun. Le Brun studied in the Academy of Florence, which was founded in 1562.

The creation of these Academies was one of the greatest achievements of the administrative organizations of Louis XIV. It started the movement in Northern Europe; the Academy of Fine Arts of Berlin was founded in 1703 under the direction of Pesne and Lesueur; the Academy of St. Petersburg in 1757; the Royal Academy of London followed in 1766—120 years after the creation of the two Academies of Painting and Sculpture in France.

The object of these first Academies was well specified in Colbert's announced intention—they were for teaching both public and free classes, and *would not* be consecrated to talent and reputation.

Letters Patent issued in 1676 ordered the creation of academic schools in the provinces. That of Lyons was founded the same year; Rheims, one year later in 1677; Bordeaux in 1688. Rapidly following came those of Toulouse, Nantes, Marseilles and Rennes.

Going still further, Colbert instituted the system of apprenticeship to start young students earlier, and from the lives of artists of that period we find that Sebastian Bourdon was kept for seven years as an apprentice. When he left his master he was fourteen years of age.

In the contract of apprenticeship of Bachelon with the engraver Michel of Avigne the period was to be three years. Michel agreed to,

> "Teach him the said art of engraver, with all pertaining to it, according
> "To God, his conscience and experience, that nothing would be hidden from him,
> "that he would be fed and brought up according to his rank. In return, Michel would
> "have the privilege of employing him about the house for all occupations licit and honest."

In the Academies of Painting and Sculpture, Le Brun —under the influence of the Florence Academy, which was intrenched in the traditions of Leonardo da Vinci—arranged that the celebrated anatomist would give the students, in his lectures, a thorough knowledge of the structure of the human body. In the translations of the Codex Vaticanus, we find that Leonardo expressed the opinion that students who are to learn any art must first be taught how to see.

Le Brun not only neglected Landscape and Inanimate Nature but proscribed them, and to this day these subjects are not taught at the Ecole des Beaux-Arts. The other subjects were limited to Perspective, History and Literature, but complaints that these last two subjects were tending towards a literary art were soon made by Le Brun, who also complained of the few and bad casts at his disposal.

Then came the Academy of Architecture, entrusted to Blondel in 1671. Thirteen years after, Louvois, Louis XIV's Minister, asked that the students be made to draw the Arch of Triumph of the Barriére du Trône, the drawings to be examined by the Academy which was to report whether any showed evidence of ability deserving encouragement. This was the first attempt to send the students of Architecture to Rome with the painters and sculptors.

At that time, working out the wonderful projects of Louis XIV, architects began to realize the importance of composition, but the Academy vetoed the proposition. Students were not to be sent to Rome until they could make proper use of such an experience, and they were not then trained far enough for that. It was not until forty years later, in 1720, that the architects were finally sent to Rome with the painters and sculptors.

The number of students then admitted to the school was limited to 28, six chosen by Blondel, the remaining 22 by the Academicians. The choice of those 22 students by the Academicians was a source of constant dissatisfaction. Since 1701, the desire had been to have a regular competition for the entrance in order to prevent partiality. Sixteen years later, in 1717, the entrance competition had to be established. Competitions in the School were also conducted in such a manner that much suspicion was felt by the competitors. After trying several years to have some of the competitions held in the presence of Blondel and the Academicians, in 1744 the Academy was obliged to put each competitor in a cell. That was the origin of the *loge* system. Nevertheless, favoritism was not abolished. In 1785 Fontaine, who became a celebrated architect, was classed second for the Prix de Rome. His fellow competitors were so displeased that they hissed the Academy and brought their complaint, in which they were unanimous, before the King. The decision of the Academy was overruled and Fontaine went to Rome.

Fifty years before, dissatisfied by the way the School was being directed by the Academy, Blondel's son, Jean François, had started an independent school in 1750. Under the pressure of the Academy, Blondel was not al-

[1] An address delivered before the Boston Society of Architects, 6 May, 1924, by Professor Albert E. Ferran, formerly Professor of Architecture at the Massachusetts Institute of Technology. The address was coincident with Professor Ferran's return to Paris. A brief résumé from the address appeared in our last issue.

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lowed to advertise his school, but the result was obtained in another way. He and his older students gave free lessons on Sundays and holidays, from 1 to 8, open to all workmen employed in house building as well as to students.

It took him 50 years to build up his training, but it became so strong that he was offered the position which his father had held so successfully. He accepted, but insisted on keeping his atelier. That was the start of the present atelier system. The result was very beneficial. It developed competition among the masters of the ateliers as well as the students and the school progressed very rapidly. It is interesting to mention that in 1788, the City of Boston consulted the Academy concerning the question of creating an Academy of Sciences and Fine Arts.

Then came the Revolution and in 1795 all the Academies were suppressed. It was a hard blow to the growing organizations, but the teachers, faithful to their work, carried on their students as best they could with their own private funds. Four years later the Convention recognized the mistake, ordered the reorganization and the Academy of Architecture was incorporated with the Academies of Painting and Sculpture, with the privilege of independent ateliers. During those four years, very queer rulings were adopted. The Prix de Rome was judged one year by officers, actors and gardeners, who were required to explain in writing the motive of their vote. Here again the mistake was recognized and the previous organization restored.

It is interesting to quote from an article on the Beaux-Arts School written by Mr. Eugene Muntz:

"Assuredly no country has passed through such a profound and radical revolution as France between 1789 and the First Empire, yet all the ways and customs of the former schools were transmitted to the latter, down to the very days and hours of the classes.

"We mention this for the benefit of young nations such as the United States of North America. Perhaps they have small belief in the influence of the past, but they will certainly see, notwithstanding the ardor of their initiative, that a time comes in the history of peoples when their ideas fall readily into the tracks beaten by their predecessors."

After 1807, very few changes were made in the organization, the most important in 1863 when the Beaux-Arts School was given an independent direction, the Academy keeping the Prix de Rome, with the privilege of using the Beaux-Arts School for the competition. It was only in 1875 that the Diploma was instituted, after much discussion. Some opponents wished to retain the tradition of Colbert—that the School should not consecrate talent. Others predicted that the diploma would be the only aim of many students. Those who favored the diploma gave the following reasons: 1—Anyone in France can call himself an Architect; the public has no way of distinguishing those who have had an architectural training from those who have had none. 2—The lowest student, having fulfilled a certain minimum of study entitling him to compete for the Diploma, knows more than many so-called architects without any school training.

At present, the School counts the regular 3 Ateliers of the School and 16 independent Ateliers, the number of which is, however, unlimited. A student can register under whichever master he chooses. The average of competitors for the entrance numbers around 350 as against over 450 before the War; 60 are admitted at each of the two sessions; 45 of these are French and 15 may be foreigners providing that the last foreigner has as many points as the last Frenchman. The numerous conflicts and discussions which have brought about these changes in the course of the School's 250 years of existence are most interesting, but it must be said that never were they allowed to do an injustice to the training or to cause any departure from the ideal of having the best school with a high standard.

Thus there are five important facts in the outline of this history.

1. Organization

The organizations of these Academies were entrusted to two of the most competent men of that time, Le Brun and Blondel. The Academies began with one central organization. Colbert created Schools in the Provinces, but these were and are still preparatory schools.

Organizing and directing a school calls for more than conscientiousness. It requires men who are artists and thoroughly acquainted with teaching. Teaching demands other qualifications than the weaknesses which make people say that those who cannot be architects can always teach Architecture.

Teaching is an art in itself. Guadet is an example of a successful teacher who may not be called a successful architect, but there is as much truth in the contrary, for a successful architect may not be a successful teacher.

Laloux is an example of a solid professional knowledge with the greatest qualities of a teacher, both used to do better than his master André, the most competent teacher of the past generation. André had a high record of 7 Prix de Rome, and it was Laloux's life ambition to do better than his master. To-day he totals 11 Grand Prix and 23 First Seconds.

With Laloux, one not only learns architecture, but also what qualities are required and necessary to teach architecture. In the 20 years that I have been connected with the Atelier Laloux, never have I heard a dissatisfied student. Laloux has been a father for all of his students, living for his Atelier more than for himself or his practice.

2. The Policy of Teaching

Colbert encouraged apprenticeship for an early start. The Academy made it possible for all students who wished to study architecture to do so, but it selected the students who were to be trained in the school. It had from the start a very high standard, and the growing number of competitors for the small number to be admitted has gradually made it possible to require a higher and higher standard for admission. This selection is still made to-day by entrance competitions, and to be a student of the School already means something more than registering and paying a tuition fee.

As for the painters and sculptors, those who succeed in the entrance competition are in the school temporarily. If they do not obtain one of certain prizes or a First Medal in those six months, they are obliged to compete

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again for the entrance and this as many times as it is necessary to become permanent students (Elêves à Titre Definitif). This eliminates the students who are studying as "Amateurs" (Dilettanti).

For the Architects, the entrance regulations of 1717 prescribed,

"that the students be at least 16 years of age, of good conduct, able to read and write, acquainted with simple arithmetic and capable of drawing architectural subjects, elementary knowledge of literature and geometry and some knowledge of the rules and principles relating to the theory of this art."

That the standard was high is amply proved by the fact that 9 years after, in 1726, only 8 students entered the school. It did not matter if but a single student passed.

3. The System and Value of Competitions for Training

Since 1720, the training of the students has had one ultimate result—the Prix de Rome, but the aim is not so much to select an architect to go to Rome as it is for the benefit of the training and teaching, which are two quite different things. Other subjects can be taught and examinations can control what the students have learned, but in architecture, principles can be taught, and successive competitions must be used to stimulate the student to learn that which he can only acquire himself, the practice of searching.

Competitions develop to the highest degree the will of the student to progress so as to outclass his comrade, but these competitions will not be effective unless the judgments adhere very strictly to the principles which are to be taught. Otherwise it is impossible to build up a tradition.

The Prix de Rome has a tradition, and a well-established one. Despradelle paid to learn that there are certain faults which one must not make in architectural composition. These are the principles of higher training. The Atelier Laloux was a strong Atelier because it was seldom without *Legistes,* in other words, Advanced Students. In 1911 well-organized propaganda brought before the House of Representatives the question of suppressing the Prix de Rome. I was told that Pascal and Laloux were delegated to explain the situation to the Minister of Fine Arts, Monsieur Dujardin-Beaumets. Pascal explained its value and its effects on the training. Laloux simply added, "If you sign the decree abolishing the Prix de Rome, you will attach your name to the largest blot in the history of the French Republic."

4. The Prix de Rome

The fourth fact explains itself, for students were not to be sent to Rome until they were ready for it. Scholarships to immature students are a mistake.

5. The Diploma of Degree

The School did not give any Diploma or Degree for 200 years, but the Diploma was later instituted for the reasons mentioned above.

Many are the students to-day who are obliged to obtain their Diploma against their own desire, in order to satisfy their parents or public opinion.

To compete for the Diploma of the Beaux-Arts School, students must have passed their examination, obtained their "values" in Architecture and produce a certificate that they have been employed in active practice for at least one year.

If the students have not actually fufilled this last requirement it is not the School's fault and the students who ignore this factor are deceiving themselves.

II. Education in the United States

What are the conditions in the United States?

First, there is no Central Organization, of which we will see the consequences further on. As to the Policy of Teaching:[2]

The schedules endeavor to combine an education and an architectural training. I shall take the schedule of the Massachusetts Institute of Technology as an example, but other universities, such as Columbia, Pennsylvania, as well as the Beaux-Arts School in Paris, have the same faults.

If we glance at the subjects on the schedule of Technology, for a four-year course, one who knows what they represent is astounded:

Physical Training; Descriptive Geometry; Military Science; Mathematics; English and History; Applied Mechanics; French; Building Construction; History of Ornament; Office Practice; Political Economy; Constructive Design; European Civilization and Art; Professional Relations; Philosophy of Architecture; Life Class; Shades and Shadows, Perspective; Water Color, Theory of Design.

With one year more, students will learn History of Painting, Landscape Architecture and Town Planning.

The study of these subjects, and of the architectural problems set, is intended to give an education and an architectural training. No one is in a better position to know what use is made of the subjects taught than the teacher who criticises the studies of the architectural problems.

It must also be said that the best students of all the Schools are the Special Students, those who already know how to draw, who know what Architecture means, and who are not crowding in too many subjects. Those best students will leave without a Degree!

The number of hours for each subject can be translated into days as they include preparation time. The working schedule, after deducting Sundays, holidays, registration and other idle days, examination weeks, and recesses, represents a total of 142 working days, or 568 days for the 4 years. The total days for all the subjects mentioned, not including Design, is 417 for the 4 years, leaving 151 days for Design, or the value of 5 months. What can students be expected to know after 5 months of architectural problems, even if that time were not chopped up as it is, and even if that time came after all the above subjects with the advantage of all the architecture learned during that time?

A grouping of the most beautiful motives will not make an architectural composition, in which the order in which elements are placed is more important than the elements

[2] It must be remembered that many students go to Architectural Schools without having known the year before that they were going to study architecture.

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themselves. In arranging a schedule, the order in which the subjects are taught is also quite as important.

At Technology, how will students learn Architecture during that time? In the first year they will have 90 hours for design or the value of 10 days. During the second year they will have 240 hours or 28 days. In the third and fourth years, deficiencies will be made up on design time. Some students crowd in a degree in 3 years, and the schedule is arranged for 9 hours work a day!

Can the student spare any time on:

Physical Training	40 hrs. at 9 hrs. a day,	4½	days
Military Science 180	hrs. at 9 hrs. a day,	20	days
English and History....480	hrs. at 9 hrs. a day,	54	days
French 280	hrs. at 9 hrs. a day,	33	days
Architectural History ..230	hrs. at 9 hrs. a day,	26	days
History of Ornament... 10	hrs. at 9 hrs. a day,	1	day
Political Economy 180	hrs. at 9 hrs. a day,	20	days
European Civilization and Art 420	hrs. at 9 hrs. a day,	46	days
Philosophy of Architecture 40	hrs. at 9 hrs. a day,	4½	days
Shades and Shadows .. 40	hrs. at 9 hrs. a day,	4½	days
Perspective 70	hrs. at 9 hrs. a day,	7½	days
Descriptive Geometry . 90	hrs. at 9 hrs. a day,	10	days
Applied Mechanics 270	hrs. at 9 hrs. a day,	30	days
Building Construction . 30	hrs. at 9 hrs. a day,	3½	days
Office Practice 80	hrs. at 9 hrs. a day,	8½	days
Professional Relations .. 50	hrs. at 9 hrs. a day,	5½	days
Freehand Drawing 380	hrs. at 9 hrs. a day,	42	days
Life Class 180	hrs. at 9 hrs. a day,	20	days
Water Color 60	hrs. at 9 hrs. a day,	6½	days
Mathematics 450	hrs. at 9 hrs. a day,	50	days
Constructive Design ...180	hrs. at 9 hrs. a day,	20	days
		417	days

The above subjects have been included in schedules for two reasons:

1. They are necessary for an adequate education, including Office Practice and Professional Relations.

2. In an attempt to prove that the schools teach more than other schools.

So far as the first reason is concerned: that the students shall learn all which is necessary for a good architectural education, it is a very legitimate desire, but the fact that schools advertise to teach more than they can teach to immature students in a 4 year course is much less legitimate.

As for the second reason, schedules are arranged to justify advertising brochures which are very deceiving, and parents are led to think that the students will be properly trained. The result is that students will have nothing more than a bad smattering of everything.

Is that what the parents are paying tuition for?

If the order in which the different subjects are to be taught is important, it is more important that schools should not attempt to teach more than what can be taught properly.

The competition between universities by means of their catalogues is disastrous. They lead to this result. Very wise was the French Academy in preventing Blondel from advertising his school, going so far as to have the King give orders to that effect to the Chief of Police in 1762.

Catalogues may advertise many subjects, but they will not teach more than that which the students can learn in 4 years, especially when those 4 years represent 568 working days, *not quite 2 years.*

Nothing is so distressing as when, at the end of the 4 years, students come to us saying: "What would you advise me to do? I only began to realize this year what architecture means. I hope to leave with a degree and would like to go on further. Where would you advise me to go?" Where can he go?

How could he have been interested in Architecture before this last year? In the first two years he has had only 30 days of Architecture!

A professor of French at Harvard is quoted as having said:

"Education in America tends to lower the instruction to the level of the best result for a middle class of students."

This is unfortunately true. Students are stopped half way and have nowhere to go.

To obtain a superior training, should students have to be advised to go to Europe and start all over again, giving 3 more years to general subjects in another language before they can reach a superior training? It would have been preferable for them to do that in the beginning.

Then what should be done?

Before anything, provision should be made for a superior training, enabling students to continue their studies. A 4 year course, mixing education and training, can only be elementary.

An article was recently published in a Boston paper under the heading: "No Federalizing Education."

There came a time in the history of this country when it was found necessary to unite the States. The future of architectural education in America depends on a better cooperation between the universities. Unfortunately, cooperation demands sacrifices; sacrifices are always difficult to make and the evils of a solution will be more readily pointed out by those who are not going to benefit by it. Universities with high ideals should not wait until beneficial measures are imposed on them.

If they become necessary, who has the power to do so?

Universities are and wish to remain independent. As they are to-day, they are as "States" without the "United."

Bad instruction and bad architecture is less important than alcohol; nevertheless the training of architecture should be regulated in the best interests of both the universities and the students, to whom it is not even honest to give a degree which means nothing but a bad smattering.

This applies as well to the Beaux-Arts School in Paris.

In that respect a remark of Guadet must be mentioned. In France, as well as in the United States, many object to the Beaux-Arts training. Some say it teaches students how to put cartouches on elevations. Guadet objected as strenuously as any one could against the courses as they were taught, but he replied:

"The courses and lectures may disappear; the Beaux-Arts School will still be the Beaux-Arts School. The training is worth more than the cause that is served by it."

What is that training?

It is that which teaches a student how to search. If

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there are subjects which students can learn any time and anywhere—French, History, Literature, etc.—*they will only learn Architecture as an Art in School.*

That opportunity is given to them by *successive competitions with unbiased judgments,* and the *advantage of a training* for which an architect in practice in America has neither the time required nor an incentive for assuming the responsibility.

A discussion between two students was once repeated to me. It deserves to be mentioned. The first, a special student, insisted that design was more important to him than the other subjects. The second, a regular student working for a degree, said:

"Suppose you win a competition on Design, how will you build it?" The first student replied, "I will hire you to do it at $18 a week."

Of all the measures which have contributed to making the Beaux-Arts School what it is, there appears to be no hope here that:

1. Universities will adhere to one Central Organization.
2. That schools or universities will require an entrance competition.

This is against their interests and their aim which are to attract as many students as possible, irrespective of their ability. When it is felt that an elimination should be made it is too late and the Schools are practically forced to give their degrees, which mean nothing, to all the students.

3. That the schools or universities will adopt schedules which will make it possible to give an education and an elementary architectural training in those 4 years.

The strength of the Harvard Law and Business Schools is due to the elimination of the lower grade of students. Can anyone guarantee that they can make an architect of any student any more than on the same basis they can guarantee to make a lawyer or a business man?

It must be recognized that very worthy efforts have been made for the teaching of architecture. Schools have grown as the country has developed, and they have done their best in the limit of their powers, but having students constantly attempting problems which are too much for them results in criticisms of the problems which are not criticisms. Students merely do as they are told and the work of the School represents 75 per cent of the instructor and 25 per cent of the student.

How much more beneficial if students could be made to search for themselves. This can only be asked of them as far as they can logically be expected to know. Can anyone teach the elements of architecture and the elements of composition in 30 days? Can boys be taught to see and draw in 30 days?

If provision can be made for a superior training, it is necessary that students be properly trained in the earlier stages. If both of these are necessary, how can they be accomplished?

The existing institution which can answer this purpose is the Beaux-Arts Institute of Design of New York. At present it has no purpose. It is supposed to be, according to its statement, "A Clearing House"!

The New York Institute of Design should be the student's aim. It should be a higher school, whether national or not, with the Paris Prize and Roman Prize as the *advanced* student's aim. The standard of the Paris and Roman Prizes should be the standard of higher training, just as is the Prix de Rome for the French School. Their results should be such that they could be used for teaching purposes, as is the Prix de Rome.

Entrance into the New York Institute of Design should be regulated along the lines the independent Ateliers bear toward the Beaux-Arts School in Paris. The Universities which prepared their students in the best way for that entrance would be rapidly recognized as the best architectural schools, while the Institute of Design would then be provided with the best students from the different schools of the country, and the winners of prizes would leave for Europe under the same conditions that the French students now leave for Italy.

If a superior training is not provided, schools and universities will not cooperate and the education will not reach above "those best results for a middle class of students."

The Universities should give the students an *architectural education* and the Beaux-Arts Institute of Design, *a higher architectural training.* The latter was created to obtain this better cooperation of the Schools and Universities.

The study of architecture in America depends on that superior training, and the aim implies the means. That calls for the New York Institute of Design with a different organization to carry out the idea of the first American who obtained the Diploma of the Beaux-Arts School. The faithful and untiring efforts of this pioneer of architectural education in America will never be too highly praised and the writer wishes here to express his profound respect and admiration for Mr. Lloyd Warren.

ALBERT E. FERRAN.

London Letter

AMONGST all the problems with which Londoners are faced, there are at least two of great architectural interest. The first is the perennial question of the Thames bridges and the second is the mooted reconstruction of the Bank of England. If the present scheme for the reconstruction of the Bank matures, it will constitute a triumph on the part of the Bank Directors over the most serious obstacles. But it is difficult to see at the present time how the alterations can be effected in such a way as to preserve even the admirable external work of Sir John Soane. Prince Street, which is a main City artery running north and south alongside the Bank, is only about 36 feet wide, and the City Authorities have decided that it must be broadened to at least 60 feet, which means that Soane's façade must go. They have actually served notice on the Bank Directors, and at the same time have summoned the London County Council to bear half the cost of the widening—which will mean a paltry matter of a quarter of a million sterling. The L. C. C. does not think the game

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worth the candle, and in the meantime the Bank, which has all its plans drawn, finds its hands tied. The situation at present, therefore, is one of complete deadlock.

All this excitement has resulted in renewed public attention being focussed on the Bank and its architectural beauties, and particularly on the work of Sir John Soane, about whom Mr. Arthur Bolton, curator of the Soane Museum in Lincoln's Inn Fields, has recently published a most delightful little illustrated book.

The Bank's architectural history really started in about 1724, when the Threadneedle site was purchased, and a new Palladian building was put up by a little-known architect called George Sampson. It was finished in 1731, and some 30 years later Sir Robert Taylor (who amongst other works was responsible for the sculpture on the pediments of the Royal Exchange), added two screen wings to Sampson's centre-piece, and built also the Bank Parlour, the Rotunda, and the west quadrangle of the Garden Court. Taylor's work is steady if a shade dull, and pales inevitably in comparison with that of Soane, who came after him in 1788. Soane was only 35 when he undertook the remodelling of the Bank, and he created a building in a manner which is so strongly original that it lies almost outside the normal trend of the development of English architecture of that period.

Soane first built the outside walls from the end of Bartholomew Lane to Lothbury and finally in 1800 carried out the great extension which includes the celebrated so-called "Tivoli Corner," inspired by the Temple of Vesta. He was greatly criticised—by Ruskin, Wyatt, and others; in the *Stones of Venice,* Ruskin likens the characteristic thin lines of Soane's rustications to the lines in a bank book. Without them, he says, the walls would have been as much fairer "as a sheet of white paper is than the leaf of a ledger."

It is Soane's internal work which is perhaps the most charming and remarkable. It is so essentially "modern," in the sense of its feeling for form and its avoidance of the stock classic formula. Soane was like a Roman modern, taking advantage of light construction, using points almost steel-slender, and yet modelling his forms with a Roman breadth.

In addition to possessing creative genius, Soane was an exact and punctilious steward of the Bank's welfare. For 45 years he was the universal provider to the needs of this vast establishment, and left, on his resignation, a tidy library of 14 folio volumes containing the records of his accounts!

The scheme for rebuilding the Bank provides for the almost wholesale gutting of the interior (including excellent work by Cockerell), and above and within the present external walls will rise a lofty office building with a portico dominating Threadneedle Street. The rough perspective published in 1922 is too hazy in drawing to give much idea of the detail. But we can only see that the new wine of Baker is too exuberantly plentiful for the old bottles of Soane. It is the fault of the problem and not of the architect.

* * *

The recent exhibition of Swedish work, mentioned in the last *Letter,* was an extraordinary success, and had perhaps the best popular "press" of any architectural exhibition of recent years. The quality of the work was high, and was of a human and understandable kind which seemed to appeal directly to the layman. The exhibition was remarkable for the number of fine models, and was of course dominated by the model and photographs of Östberg's Stadshus. It is a serene and stately building, combining in the details of its treatment both dignity and delight. It is also mature in its completeness and lacks the amateurish striving which is so noticeable in many of the recent English civic buildings.

In Sweden also there is noticeable a faint cleavage between young and old. Östberg is evidently to some almost a traditionalist and certainly a romanticist. The younger men are developing a style of studied and subtle refinement, with at times a faint flavor of Percier and Fontaine, but also with traces of hardness and obvious effort. But none of the work shown was coarse or bad, and much of it reached a very high level indeed.

As was fitting, the exhibition was inaugurated by an Anglo-Swedish Ball, terminated in the early hours by a *pas seul* of uncertain character in which there was probably some Swedish and certainly some Scotch.

* * *

A considerable number of Swedish architects were able to visit London during the Exhibition. Mr. Tengbom, with one of the largest and best Swedish practices; Mr. Bjerke, architect for the Gothenberg exhibition; Mr. Ahlberg, one of the younger "coming men," and a few others toured Wembley and, amongst other places, Chequers, the country house of England's Prime Ministers.

Chequers is a charming red brick Elizabethan house, with a simple and dignified garden front facing a broad sweep of English lawn. Internally there is a good "Long Gallery" and much pleasant furniture and panelling, and a hall enlarged by Sir Reginald Blomfield, a spot in which Mr. Lloyd George used to enjoy private cinema displays of Chaplin and Mary Pickford. The house is admirably kept, ready at any moment to receive distinguished visitors.

* * *

The Prime Minister shows himself to be a patron of architecture (his son Alistair is an architect by profession) and was actually the guest of honor at the last dinner of the Architecture Club. He made an admirable and sensible speech. The Club's chairman, Mr. J. C. Squire, alluded to the once feared possibility of London being rechristened Ramseygrad—and neatly translated one item of the menu—*saumon écossais sauce mousseline* —into a compliment to the Premier, "Scotch sagacity with Mussolini sauce."

* * *

The Royal Academy Exhibition is once more with us. This year the competence of the painting is general, but pictures of outstanding interest are rather scarce. Orpen is extremely efficient and masterly but perhaps the most interesting portrait is the Sargent painting of Sir Philip Sassoon. Philip Connard in subjects and a manner of his own also touches a high level. The architectural exhibit is chiefly remarkable as a testimony to the skill and industry of Mr. Cyril Farey who, out of less than 200 drawings shown, is responsible for the execution of at least 30. As an architectural renderer he sweeps

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the board. Sir Edwin Lutyens shows a remarkable house in Devon called Drogo Castle. Its general character is mediæval, and with just a faint flavor of the gothic of new Liverpool Cathedral, heightened by a spice of modern Dutch. The general impression is one of dullness not without relief, but in too many cases excellence of presentation absorbs the main attention. At the Palace of Arts at Wembley there is, however, an exhibition of current architecture—photographs and models—which is a distinct consolation. But unfortunately most people who go to Wembley prefer the Queen's Dolls House or the switchback.

* * *

The scholarship for foreign travel offered by the Society of Architects has been awarded this year for the second time, the award going to Mr. Harding Thompson, A.R.I.B.A., M.T.P.I. Last year the scholarship went to Mr. Cordingly who was successful at the same time in winning the Rome Scholarship in Architecture, which resulted in his being unable to make the trip to America which the travel scholarship offered. Mr. Harding Thompson is an ex-pupil of Liverpool University and London University and is a lecturer on Town Planning at the Architectural Association Schools in London. It is probable that he will go to the United States for about three months to study aspects of town planning, particularly housing in industrial centres. This time there is every reason to hope nothing will interfere with fulfilling the terms of this interesting scholarship. "X."

London.

Notes on the Fifty-seventh Convention

WHEN IT was first whispered in my ear that I might "do" the Fifty-seventh Convention for the JOURNAL, I was delighted at what seemed to be another Heaven-sent opportunity to poke friendly fun at my betters. But now that the Convention is over and done, and in all humility I take my pen in hand, I am subdued by a *dread* that I may not be worthy even to have been of it and a *knowledge* that I am surely not capable of doing it justice. But then Justice is one of the things that are never done. Still, that is not the only thing that has occasioned this feeling of unworthiness. In the front row among them one might mention Mr. Pond, Mr. Kimball, *The Autobiography of an Idea,* Mr. Magonigle's contribution to the progress of Architecture and the assimilation of THINKING as a habit, and so forth and so on.

It opened as the Fifty-seventh Convention—"one of the Fifty-seven" one might say; just like a Pickle, or a Soup, or a Sauce, or an ordinary Convention. But something was in the air, or in everybody's heart, or somewhere nearby, that took charge at once and removed this Convention from classification with the other fifty-six. This one was *not* a Pickle, nor a Soup, nor a Sauce, nor even an ordinary Convention. It was a reunion of Cultured Gentlemen, a few of whom had been Thinking, some of whom voiced the results of their Thinking, and most of whom will do a lot more Thinking before the 20th April, 1925, rolls across the horizon.

Indeed that little word THOUGHT, that loves to hide in the dictionary and never seems to rent space in the minds of men, might be said to have become, in some unconscious and unpretentious way, the "Keynote" of this Convention. It is very difficult to attempt to *write* about these things, one can only *think* about them—and the only way that I can even approximate a fulfillment of my obligation will be to set down a few of the thought-impressions that I have carried away from the Corcoran this year, and all in the Humble Hope that there will be started thereby no Wars in the "Outlying Districts."

The first thing that made a stimulating impression upon me was a discussion regarding the Octagon property which was induced by a report presented by the new C. O. (then Q. M.), Mr. Waid. This discussion made me wonder if our Institute really does *need* the additional space and the additional income that the proposed "improvements" would offer—and it makes me wonder if our Institute can really *dare* to invade the quiet, peaceful precincts of that pleasant reminder of a kindly past with the modern notes of Offices to rent and a Convention Hall to fill with Howling Mobs. The Octagon property *restored* to its original state would be very nearly unique—certainly entirely so as the National Headquarters of a Society. One cannot *add* anything to a complete and thoughtful expression of Beauty and Comfort, but it will be very easy to *subtract* materially therefrom by the addition of the negative quantity known as "modern improvements."

On Wednesday afternoon two of the most distinguished and sincere servants of the Government, Colonel Clarence O. Sherrill and General Herbert M. Lord, helped Mr. Medary present the Public Building problem in a way that was at once illuminating, instructive, and entertaining. Of course it all boiled itself down to the very simple fact that the only way to solve this, or any other Governmental problem, is to begin to send *thinkers* to Congress instead of trying to keep them all at home.

In the evening a very interesting discussion of Architectural Education was "put across" and the thing that surprised some of us, and pleased all of us (we hope), was that Professor Emerson indicated that the Idea of a Sympathetic Development of Individuality was beginning to replace a hackneyed and mechanical transplanting of General rules and regulations.

Thursday morning a consistent effort was made to nominate people for places they seemed only very *mildly* interested in occupying. And this, to me, is a very significant thing, namely: that our Institute has so far progressed toward the realization of the Ideal that the Power of Place seems to have lost any appeal in most cases. There was absolutely *no* excitement, so far as I could see, either in connection with the nominations or the voting—*no* campaigning, *no* self-seeking—none of those things that are so very American and so very convention-y.

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And in the Afternoon the real *raison d'être* of this Convention was put on the table. All honor to whomsoever gave the Idea birth—all honor to our President for his choice of Magonigle to lay out the scheme and deliver the prologue—all honor to Magonigle himself, whose charming personality and kindly cleverness were only equalled by the brilliance of the four other Stars whom he chose to shine with him.

"One, two! One, two! And through and through
The vorpal blade went snicker-snack!
They left it dead, and with its head
They went galumphing back.

'And have Ye slain Old Plagiarism?
Come to our Hearts ye beamish Boys!
O frabjious day! Callooh! Callay!
We'll chortle in our Joy!'"

Last year we had a very uninteresting and really commonplace Convention finished off so beautifully, and atoned for, as it were, by the marvelous picture that Greenley and Hewlett painted into our hearts. This year we have had a very worth-while Convention with the Climax in the middle; the brilliant Mental Picture which the five Masters have printed into our Minds. Both pictures will forever live with us, but in perhaps different ways. The Greenley-Hewlett Pageant Picture was given us to admire and cherish as a complete and beautiful *finality*. The five-chapter serial presented by Magonigle with his kindly polished wit; Professor Boring without any Professional Professorism; Willcox with smile-less but side-splitting humor; Cram with his own inimitable personal Fireworks and fearless directness; and Steele with his calm and beautiful philosophy,—is but an inspiring and stimulating Beginning. May the Great Mind of which these five have proven such brilliant reflections nourish and develop the little seed their thought has planted.

Thursday night the discussion was devoted to Competitions and Architectural Relations. In regard to Competitions, the suggestion was advanced that a certain limited exercise of "States' Rights" might be *considered* in this connection. Mr. Pond misunderstood, I believe, what was in the minds of some of the speakers, and gave us a piece of *his* mind. As one of the guilty parties, I might say that it is vastly more inspiring to catch the Devil from Mr. Pond than to collect palms from ordinary people. That matter of Architectural Relations was only touched upon—it will take several years to arrive at a real crystallization of thought upon that important, and at present somewhat chaotic, subject.

Friday morning Messrs. Morris of New York and Zantzinger of Philadelphia made some remarks about the Beaux Arts Institute of Design, and modestly suggested the great Truth that this magnificent institution, founded upon unselfishness and built of co-operation, is the greatest Educational influence in our Professional field.

After this Fifty-seventh Convention of the American Institute of Architects, one is simply overwhelmed with the honor and Glory of being a part and parcel, however small, of this great body of cultured polished thinkers that our Institute has this year proven itself to be.

HARRY F. CUNNINGHAM.

The Imperial Age[1]

I

THE DECADE between 1890 and 1900 saw the rise of a new period in American architecture. This period had, it is true, been dimly foreshadowed by the grandiose L'Enfant, who sought to convert Washington into the image of Louis XIV's Paris; but if the superficial forms of this new period resembled those of the early republican period, and if the precedents of classic architecture again became a guide, the dawning age was neither a revival nor a continuation.

In the meanwhile, fresh influences had entered. The generation of students who had studied in *l'Ecole des Beaux Arts* after the Civil War were ready, at last, to follow the lone trail which Richard H. Hunt had blazed. Richardson's most intimate disciples reacted against the stamp of his personality and sought a more neutral mode of expression, consecrated by established canons of good taste. On top of this, the introduction of steel-cage construction removed the necessity for solid masonry, and placed a premium upon the mask. The stage was set for a new act of the drama.

All these influences shaped the style of our architecture when it arose; but the condition that gave it a substantial base was the rise of a new order in America's economic life. Up to this time, the chief industrial problem had been to improve the processes of mechanical production and to stake out new areas for exploitation. One may compare these economic advances to the separate sorties of an army operating on a wide front: any lone adventurer might take his courage in his hands and exploit an invention, or sink an oil well, if he could find it. By 1890 the frontier had closed; the major resources of the country were under the control of the monopolist; it became more important to consolidate gains than freshly to achieve them. Separate lines of railroads were welded into systems; separate steel plants and oil plants were wrought into trusts; and where monopoly did not rest upon a foundation of natural advantage, the "gentlemen's agreement" began its service as a useful substitute. The popular movements which sought to challenge the forces of this new regime—the labor movement, socialism, populism—had neither analyzed the situation with sufficient care

[1] AUTHOR'S NOTE. By itself, this essay may seem a somewhat stylicized description of the development of American architecture between 1890 and 1910. It should be remembered, therefore, that "The Imperial Age" falls between two other chapters, "The Defeat of Romanticism" and "The Age of the Machine," and that various qualifications which are necessary to a faithful picture of the period in its totality are presented in these chapters. It is only the imperial aspect of this architecture that is strong enough and permanent enough to deserve criticism; the remaining work, for the most part, is literally beneath criticism—a transitory wreckage which is swiftly being broken up and swept away.

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nor attracted the adherence of the majority. The defeat of Henry George as a local political candidate was symbolic: by 1888 a humane thinker like Edward Bellamy had already accepted the defeat, had embraced the idea of the trust, and had conceived a comprehensive utopia on the basis of letting the process of monopoly go the limit so that finally, by a mere yank of the levers, the vast economic organizations of the country would become the "property" of the people.

The drift to the open lands came to a full pause. The land-empire had been conquered, and its overlords were waxing in power and riches: the name "millionaire" became the patent of America's new nobility. With the shift from industry to finance went a shift from the producing towns to the spending towns: architecture came to dwell in the stock exchanges, the banks, the shops, and the clubs of the metropolis; if it sought the countryside at all, it established itself in the villas that were newly laid out on hill and shore in the neighborhood of the great cities. The keys to this period are opulence and magnitude: "money to burn."

These years witnessed what the Roman historian, Ferrero, has called a *"véritable recommencement d'histoire."* In the new centers of privilege there arose a scale of living and a mode of architecture which, with all its attendant miseries, depletions and exploitations, recalled the Rome of the first and second centuries after Christ. It is needless to say that the greater proportion of the factories, shops and homes which were erected had no relation, at all to the imperial regime; for not everyone participated in either the benefits or the depressions that attended the growth of monopoly; but the accent of this period, the dominant note, was an imperial one. While the commonplace building of the time cannot be ignored, it remains, so to say, out of the picture.

II

Hardly had the process of concentration and consolidation begun before the proper form manifested itself. The occasion for its appearance was the World's Columbian Exposition, opened in 1893. In creating this fair, the enterprise and capacity for organization, which the architects of Chicago had brought to the construction of the skyscraper, transformed the unkempt wilderness of Jackson Park into the Great White City in the space of two short years. Here the architects of the country, particularly of New York and Chicago, appeared for the first time as a united profession, or, to speak more accurately, as a college. Led by the New Yorkers, who had come more decisively under European influence, they brought to this exposition the combination of skill and taste in all the departments of the work that had, two centuries earlier, created the magnificent formalities of Versailles. There was unity of plan in the grouping of the main buildings about the lagoon; there was unity of tone and color in the gleaming white façades; there was unity of effect in the use of classic orders and classic forms of decoration. Lacking any genuine unity of ideas and purposes—for Root had initially conceived of a variegated Oriental setting—the architects of the exposition had achieved the effects of unity by subordinating their work to an established precedent. They chanted a Roman litany above the Babel of individual styles. It was a capital triumph of the academic imagination. If these main buildings were architecture, America had never seen so much of it at one time before. Even that belated Græco-Puritan, Mr. Charles Eliot Norton, was warm in praise.

It would be foolish to quarrel with the style that was chosen for these exposition buildings, or to deny its propriety. Messrs. McKim, White, Hunt and Burnham divined that they were fated to serve Renaissance despots and emperors with more than Roman power, and unerringly they chose the proper form for their activites. Whereas Rome had cast its spell over the architects of the early Renaissance because they wished once more to enter into its life, the life of its sages and poets and artists, it attracted the architects of the White City because of its external features—because of its stereotyped canons and rules, because of the relatively small number of choices it offered for a lapse in taste, because of its skill in conspicuous waste, and, finally, because of that very non-committal quality in its massive forms which permitted the basilica to become a church, or the temple to become a modern bank.

Of all the Renaissance architects, their impulses and interests were nearest, perhaps, to Robert Adam, whose church at West Wycombe could be turned into a ballroom by the simple act of removing the pews and permitting the gay walls and decorations to speak for themselves. Behind the white stiff façade of the World's Fair buildings was the steel and glass structure of the engineer: the building spoke one language and the "architecture" another. If the coming of the skyscraper had turned masonry into veneer, here was a mode of architecture which was little but veneer. In their place, at the Fair, these classic buildings were all that could be demanded: Mr. Geoffrey Scott's defense of the Baroque, in *The Architecture of Humanism,* applies particularly to its essential manifestations in the Garden and the Theatre—and why not in the Exhibition Building?

Form and function, ornament and design, have no inherent relation, one with the other, when the mood of the architect is merely playful: there is no use in discussing the anatomy of architecture when its only aim is fancy dress. As a mask, as a caprice, the classic orders are as justifiable as the icing on a birthday cake: they divert the eye without damaging the structure that they conceal. Unfortunately, the architecture of the Renaissance has a tendency to imitate the haughty queen who advised the commons to eat cake. Logically, it demands that a Wall Street clerk shall live like a Lombardy prince, that a factory should be subordinated to æsthetic contemplation; and since these things are impossible, it permits "mere building" to become illiterate and vulgar below the standards of the most debased vernacular. Correct in proportion, elegant in detail, courteous in relation to each other, the buildings of the World's Fair were nevertheless only the simulacra of a living architecture; they were the concentrated expression of an age which sought to produce "values" rather than goods. In comparison with this new style, the romanticism of the Victorian Age, with its avid respect for the mediæval building traditions, was honesty and dignity itself.

The Roman precedent, modified by the work of Louis

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XIV and Napolean III, by Le Nôtre and Haussmann, formed the basis not merely for the World's Fair, but for the host of city plans that were produced in the two decades that followed. It seemed for a while as if the architect might take the place of the engineer as city planner, and that the mangled regularity of the engineer's gridiron plan, laid down without respect to topographic advantage or to use, might be definitely supplanted in the remodelled central districts and in the new extensions and suburbs of the American city. The evil of the World's Fair triumph was that it suggested to the civic enthusiast that every city might become a fair: it introduced the notion of the City Beautiful as a sort of municipal cosmetic, and reduced the work of the architect to that of putting a pleasing front upon the scrappy building, upon the monotonous streets and the mean houses, that characterized the newer and the larger cities.

But if the engineer, who had devoted himself to sewers and street-systems alone, had been superficial, the architectural city planner, who devoted himself to parkways alone, to grand avenues à L'Avenue de Bois-de-Boulogne alone, or to squares like the Place de L'Etoile alone, was equally superficial. The civic center and the parkway represented the better and more constructive side of this effort: in Cleveland, in Pittsburgh, in Springfield, Mass., harmonious groups of white buildings raised their heads above the tangle of commercial traffic, and in the restoration of L'Enfant's plan for Washington, the realities of the imperial regime caught up with the dreamer born out of his due time. Most of these plans, however, were pathetically unreal. One of the reports for Manhattan, for example, devoted pages and pages to showing the improvement that would follow the demolition of the wall around Central Park—and the importance of clipped trees in the design of grand avenues!

Plainly, the architect did not face with sufficient realism the colossal task with which he was confronted in the renovation of the city. He accepted his improvements too much at the value placed upon them by the leaders of Big Business—as a creator of land-values, as an element in increasing the commercial attractiveness of the city. Did not Mr. Daniel Burnham himself point to the improvements in Periclean Athens, not as the embodiment of Athenian citizenship and religion at its highest point, but as a measure for increasing the attractiveness of the city to visitors from abroad? Cut off from his true function to serve and beautify the community, made an accessory of business itself, like the merest salesman or advertising agent, it is no wonder that the architect speedily lost his leadership; and that the initiative went once again into the hands of the engineer.

The main merit of all these efforts to perpetuate the World's Fair is that they sought to achieve some of the dignity and decisiveness of the formal plan. Their weakness was that they neglected new elements, like the billboard, the skysign, the subway, the tall building, which undermined the effects of the plan even when it was achieved. In their efforts to escape from the welter of misguided commercial enterprise, the advocates of the city beautiful placed too great reliance upon spots of outward order and decency; they took refuge in the paper symmetry of axial avenues and rond-points, as one finds them in Haussmann's Paris, and neglected the deeper and more genuine beauties of, let us say, the High Street in Oxford or Chipping Camden, or of many another European town that had achieved completion in its essentials before the 19th century.

In short, the advocates of the city beautiful sought a remedy on paper which could be purchased only by a thorough reorganization of life. If all this applies to the better side of the World's Fair, it touches even more emphatically the worse.

III

The twenty years between 1890 and 1910 saw the complete rehabilitation of the Roman mode as the very cloak and costume of imperial enterprise. The main effort of architecture was to give an effect of dignity and permanence to the façades of the principal thoroughfares: the public buildings must dominate the compositions, numerous boulevards and avenues must concentrate the traffic at certain points and guide the stranger to the markets and amusements: where possible, as in the Chicago plan by Messrs. Burnham and Bennett, avenues must be cut through the gridiron pattern of blocks in order to achieve these effects. If this imperial street system is somewhat arbitrary, and if the necessary work of grading, filling, demolishing, and purchasing existing property rights is extremely costly, the end nevertheless justifies the means—the architecture impresses and awes a populace that shares vicariously in its glories. Should the effect prove a little too austere and formidable, the monuments will be offset with circuses and hippodromes.

In all this, the World's Fair was a precise and classic example, for it reproduced in miniature the imperial order. When the financial panic of 1893 kept people away from the exhibitions of art, industry and culture, sideshows were promptly introduced by the astute organizers. Beyond the serene classic façades, which recalled the elevation of a Marcus Aurelius, sprawled the barkers, the freaks and the tricksters whose gaudy booths might have reminded the spectator of the other side of the imperial shield—the gamïnism of Petronius Arbiter. The transformation of these white façades into the Gay White Ways came during the next decade; whilst the sideshows achieve a separate existence as "Coney Island." On top of this came the development of the mildly gladiatorial spectacles of football and baseball: at first invented for playful exercise, they became a standard means of exhibition by more or less professional performers. The erection of numerous amphitheaters and arenas, such as the Yale Bowl, the Harvard Stadium, the Lewisohn Stadium and their counterparts in the West, rounded out the imperial spectacle.

By a happy congruence of forces, the large-scale manufacture of Portland cement and the reintroduction of the Roman method of concrete construction, came during the same period. Can any one contemplate this scene and still fancy that imperialism was nothing more than a move for foreign markets and territories of exploitation? On the contrary, it was a tendency that expressed itself in every department of Western civilization, and if it appears most naked, perhaps, in America, that is only because, as in the earlier periods, there was so little here to stand in

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its way. Mr. Louis Sullivan might well complain, in *The Autobiography of an Idea,* that imperialism stifled the more creative modes of architecture which might have derived from our fine achievements in science, from our tentative experiments in democracy. It seems inevitable, however, that the dominant fact in our civilization should stamp the most important monuments and buildings with its image. In justice to the great professors of the classic style, Messrs. McKim and Burnham and Carrère and Hastings, one must admit that the age shaped them and chose them and used them for its ends. Their mode of building was almost unescapably determined by the thing built.

The change in the social scene which favored an imperial setting was not without its effects upon the industries that supplied the materials for architecture, and upon the processes of building itself. Financial concentration in the stone-quarries, for example, was abetted by the creation of a national system of rail-transportation, and partly, perhaps, by the elaboration of the mechanical equipment for cutting and trimming stone beyond a point where a small plant could work economically. The result was that during this period numerous small local quarries, which had been called into existence by Richardson's fine eye for color contrasts, were allowed to lapse. Vermont marble and Indiana limestone served better the traditions that had been created in the White City.

The carrying of coals to Newcastle is always a pathetic practice; it remained for the imperial age to make it a subject for boasting. Just as many Connecticut towns, whose nearby fields are full of excellent granite boulders, boast a bank or a library of remote marble, so New York City, which has a solid foundation of schist, gneiss and limestone, could point to only a handful of buildings, notably the College of the City of New York and Mr. Goodhue's Church of the Intercession, in which these excellent local materials were used. The curious result of being able by means of railway transportation to draw upon the ends of the earth for materials has been, not variety, but monotony. Under the imperial regime the architect was forced to design structures that were identical in style, treatment and material, though they were placed thousands of miles apart, and differed in every important function. This ignorance of regional resources is not incompatible with grand effects, or even on occasion with decently good architecture. But it does not profit by that fine adaptation to site, that justness of proportion in the size of window and slope of roof, which is an earnest of the architect's mastery of the local situation. Substitute Manilla for the military colony of Timgad, or Los Angeles for Alexandria, and it is plain that we have here another aspect of Ferrero's generalization. Even architects whose place of work was nearer to the site of their buildings were nevertheless compelled to copy the style of the more successful practitioners in New York and Chicago.

In government, in industry, in architecture, the imperial age was one. The underlying policy of imperialism is to exploit the life and resources of separate regions for the benefit of the holders of privilege in the capital city. Under this regime, all roads lead literally to Rome. While, as the German historian, W. H. Riehl, points out, the provincial highroads served to bring the city out into the countryside, the railroads served to bring the major cities together and to drain the products of rural regions into the metropolis. It was no accident that the great triumphs of American architecture during the imperial period were the railroad stations; particularly the Pennsylvania and the Grand Central in New York, and the Union Station in Washington. Nor is it by mere chance that the Washington and the Pennsylvania station are the monuments to two architects, Messrs. McKim and Burnham, who worshipped most whole-heartedly at the imperial shrine. With capital insight, these men founded the American Academy at Rome; they recognized their home.

Æsthetically considered, it is true perhaps that the finest element in the Pennsylvania station is the train hall, where the architect has dealt sincerely with his steel elements and has not permitted himself to cast a fond, retrospective eye upon the Roman baths. When all allowances are made, however, there remains less for criticism in the railroad stations and the stadiums—those genuinely Roman bequests—than in any of the other imperial monuments. Indeed, so well does Roman architecture lend itself to the railroad station that one of the prime virtues of such a building—namely, ease of circulation—was even communicated to the New York Public Library, where it is nothing but a nuisance, since it both increases the amount of noise and diminishes the amount of space for reading rooms that are already overcrowded.

Here, indeed, is the capital defect of an established and formalized mode: it tends to make the architect think of a new problem in terms of an old solution for a different problem. Mr. Charles McKim, for example, indignantly withdrew from the competition over the New York Public Library because the demands of the librarian for a convenient and expeditious administration of his business interfered with the full-blown conception which Mr. McKim had in mind. All this happened after years of demonstration in the Boston Library of Messrs. McKim and White's failure to meet that problem squarely; and it apparently was not effected by Mr. McKim's experience with the great Columbia Library, which has ample space for everything except books. In short, the classic style served well enough only when the building to be erected had some direct relation to the needs and interests of the Roman world—the concourse of idlers in the baths or the tiers of spectators in the circuses and hippodromes. When it came face to face with our own day, it had but little to say, and it said that badly, as anyone who will patiently examine the superimposed orders on the American Telegraph Building in New York will discover for himself.

IV

With the transition from republican to imperial Rome, numerous monuments were erected to the Divine Cæsar. Within a much shorter time that marked the growth of the imperial tradition in America, a similar edification of patriotic memories took place.

In the restoration of the original plan of Washington, which began in 1901, the axis of the plan was so altered

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as to make it pass through the Washington Monument, and at the same time the place of the Lincoln Memorial, designed by the late Mr. Henry Bacon, a pupil of Mr. McKim's, was assigned. This was the first of a whole series of temples devoted to the national deities. In the Lincoln Memorial, in the McKinley Memorial at Niles, Ohio, in the Hall of Fame in New York University, and in their prototype, Grant's Tomb, one feels not the living beauty of our American past but the mortuary air of archæology. The America that Lincoln was bred in, the homespun and humane and humorous America that he wished to preserve, has nothing in common with the sedulously classic monument that was erected to his memory. Who lives in that shrine, I wonder—Lincoln, or the men who conceived it? The leader who beheld the mournful victory of the Civil War, or the generation that took pleasure in the mean triumph of the Spanish-American exploit, and placed the imperial standard in the Philippines and the Caribbean?

On the plane of private citizenship a similar movement took place: while before 1890 one can count the tombs in our cemeteries that boast loudly of the owner's earthly possessions and power, from that time onward the miniature temple-mausoleum becomes more and more frequent. In fact, an entire history of architecture could be deduced from our cemeteries; all that has so far been described could be marked in the progress from the simple slab, carved in almost Attic purity, with a weeping willow or a cubistic cherub, that characterized the 18th century, to the bad lettering and the more awkward ornamented headstones of the early 19th century; and from this to the introduction of polished granite and iron ornament in the post-Civil War cemetery, down to the mechanically perfect mausoleum, where the corpses are packed like the occupants of a subway train, that some of our more effusively progressive communities boast of today. As we live, so we die: no wonder Shelley described hell as a place much like London.

The Roman development of New York, Chicago, Washington, and the lesser metropolises had an important effect upon the homes of the people. Historically, the imperial monument and the slum-tenement go hand in hand. The same process that creates an unearned increment for the landlords who possess favored sites contributes a generous quota—which might be called the unearned excrement—of depression, overcrowding, and bad living in the dormitory districts of the city. This had happened in imperial Rome; it had happened again in Paris under Napoleon III, where Haussmann's sweeping reconstructions created new slums in the districts behind the grand avenues, quite as bad, if far less obvious, than those that had been cleared away; and it happened once again in our American cities. Whereas in Rome a certain limit, however, was placed upon the expansion of the city because of the low development of vehicular traffic the rise of mechanical transportation placed no bounds at all on the American city. If Rome was forced to create huge engineering projects like aqueducts and sewers in order to cleanse the inhabitants and remove the offal of its congested districts, the American city followed the example of the modern Romes like London and Paris by devising man-sewers, in which the mass of plebeians could be daily drained back and forth between their dormitories and their factories.

So far from relieving congestion, these colossal pieces of engineering only made more of it possible: by pouring more feeder lines into the central district of New York, Boston, Chicago, or where you will; rapid transit increased the housing congestion at one end and the business congestion at the other. As for the primary sewer system devised for the imperial metropolis, it could scarcely even claim, with rapid transit, that it was a valuable commercial investment. The water outlets of the New York region are so thoroughly polluted that not merely have the shad and the oyster-beds vanished from the Hudson River, where both once flourished, but it is a serious question whether the tides can continue to transport their vast load of sewage without a preliminary reduction of its content.

Like the extension of the water conduits into the Adirondacks, all these necessary little improvements add to the per capita cost of living in an imperial metropolis, without providing a single benefit that a smaller city with no need for such improvements does not enjoy. In the matter of public parks, for example, the Committee on Congestion in New York, in 1911, calculated that the park space needed for the East Side alone, on the scale provided by the city of Hartford, would be greater than the entire area of Manhattan Island. In short, even for its bare utilitarian requirements, the mass-city, as the Germans call it, costs more and gives less than communities which have not had imperial greatness inflicted upon them.

As to the more positive improvements under the imperial regime, history leaves no doubt as to their dubious character, and current observation only reinforces history's lesson. In discussing the growth of the tenement in Rome after the Great Fire, Friedlander says:

"The motives for piling up storeys were as strong as ever: the site for Cæsar's Forum had cost over £875,000 compensation to tenants and ground landlords. Rome had loftier houses than modern capitals. A disproportionately large part of the area available for building was monopolized by the few, in consequence of the waste of space in the plethoric architecture of the day, and a very considerable portion was swallowed up by the public places, such as the imperial forums, which took up six hectares, as well as by the traffic regulations and extensions of the streets. The transformation and decoration of Rome by the Cæsars enhanced the scarcity of housing, as did Napoleon III's improvements in Paris. A further adjutory cause of the increase in the price of dwellings was the habit of speculation in house property (which Crassus had practiced in great style) and the monopoly of the proprietors, in consequence of which houses were let and sublet."

It would be tedious to draw out the parallel: given similar social conditions in America, we have not been able to escape the same social results; even down to the fact that the palliatives of private philanthropy flourish here again as they had not flourished anywhere on the same scale since the Roman Empire. So much for imperial greatness. Mr. Daniel Burnham said of the World's Fair, according to testimony of Mr. Bennett and Mr. Charles Moore, "that it is what the Romans would

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have wished to create in permanent form." One may say of our imperial cities that they are what the Romans did create—but whether the form will be permanent or not is a matter we may leave to the sardonic attentions of history.

For my own part, I think we have at last acquired a criterion which will enable us to sum up the architecture of the imperial age, and deal justly with these railroad stations and stadiums, these sewers and circuses, these aqueducts and parkways and grand avenues. Our imperial architecture is an architecture of compensation: it provides grandiloquent stones for people who have been deprived of bread and sunlight and all that keeps man from becoming vile. Behind the monumental façades of our metropolis trudges a landless proletariat, doomed to the servile routine of the factory system; and beyond the great cities lies a countryside whose goods are drained away, whose children are uprooted from the soil on the prospect of easy gain and endless amusements, and whose remaining cultivators are steadily drifting into the ranks of an abject tenantry. This is not a casual observation: it is the translation of the last three census reports into plain English. Can one take the pretensions of this architecture seriously; can one worry about its æsthetics or take full delight in such finer forms as Mr. Pope's Temple of the Scottish Rite in Washington, or Mr. Bacon's Lincoln Memorial? Yes, perhaps—if one refuses to look beyond the outward mark.

Even in some of its proudest buildings, the imperial show wears thin; and one need not peer into the slums beyond in order to realize its defects. The rear of the Metropolitan Museum or the Brooklyn Museum, for example, might be the rear of a row of Bronx tenements or Long Island City factories, so gaunt and barren and hideous is their aspect. If the imperial age was foreshadowed in the World's Fair, it has received its apotheosis in the museum. In contrast to the local museums, one still finds occasionally in Europe, which are little more than extensions of the local curio cabinet, the imperial museum is essentially a loot-heap, a comprehensive repository for plunder. The sage Viollet-le-Duc once patly said that he preferred to see his apples hanging on a tree, rather than arranged in rows in the fruit shop: but the animus of the museum is to value the plucked fruit more than the tree that bore it. Into the museum come the *membra disiecta* of other lands, other cultures, other civilizations. All that had once been a living faith and practice is here reduced to a separate specimen, pattern, or form. For the museum, the world of art has already been created: the future is restricted to a duplication of the perfected past. This animus is identic to that which made the Romans so skillful in copying Greek statues and so dull in carving their own; a desirable habit of humility were it not for the fact that the works of art in the past could not have been created had our ancestors been so punctual in respect to finished work. The one thing the museum cannot attempt to do is to supply a soil for living art: all that it can present is a pattern for reproduction. To the extent that an insincere or imitative art is better than no art at all, the Imperial Age marked an advance: to the extent, however, that a living art is a fresh gesture of the spirit, the museum confessed all too plainly that the age had no fresh gestures to make; on that score, it was a failure, and the copying of period furniture and the design of period architecture were the livid proofs of that failure.

The museum is a manifestation of our curiosity, our acquisitiveness, our essentially predatory culture; and these qualities were copiously exhibited in the architecture of imperialism. It would be foolish to reproach the great run of architects for being moulded by the dominant social and economic characteristics of the period; for even those who in belief and design have remained outside the age —such resolute advocates of a mediæval policy as Dr. Ralph Adams Cram—have not been able to divert its currents. In so far as we have learned to care more for empire than for a community of freemen, living the good life, more for dominion over palm and pine than for the humane discipline of ourselves, the architect has had no choice but to enshrine our desires. The opulence, the waste of resources and energies, the perversion of human effort represented in this architecture are but the outcome of our general scheme of working and living. Architecture, like government, is about as good as a community deserves. The shell that we create for ourselves marks our spiritual development as plainly as that of a snail denotes its species. If some times architecture becomes frozen music, we have ourselves to thank when it is a pompous blare of meaningless sounds.

LEWIS MUMFORD.

Comment

AMERICA'S progress is well outlined in Hegel's description of the Spirit of a Nation, what creates it, its progression from stage to stage, and expression of that spirit at the various stages of its journey, from the time when the first sturdy group stood together in a circle with women and children inside and weapons pointing out, on through prosperity to its very decadence.

The national spirit up to ten years after the Civil War seemed to be intensely patriotic. When peace settled over the country, material prosperity seemed to express the spirit. In 1876 we had an Exposition at Philadelphia, where the buildings and grounds showed a feeble attempt at a proper housing and setting of our first one of the series of World's Fairs. At that time we had not reached the stage of organized prosperity which made the Chicago Exposition possible and which Mr. Mumford properly likens, in dynamic power, to that of Rome. Quite naturally it reflected the physical aspect of the Eternal City in a marked degree. It could not be otherwise and follow natural expression. We were proud of it, and it gave the nation a new respect for architecture. If an exposition were projected now it is doubtful whether we could find a group of men capable of designing a beautiful ensemble in any other general style than one with recognized classic as a basis.

The Exposition of 1890 in France was a real creation—unlike any classic architecture. The French architects were brilliant in their successful designing; their buildings were of honest exposition architecture, but were they sympathetic to the American public? No! Americans were not ready for these new ideas and architectural

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spirit; they did not like the Exposition of 1890, which was good architecture, but they did respond to the one of 1893 in Chicago because it fitted the national spirit.

Good architecture does not necessarily come in response to effective business administration, nor does high intellectuality connote appreciation of art. Beautiful forms are produced by all ripe old cultures, even by savages when tribes are old, but leaders in science today do not produce plastic beauty; and the men of science are now in the saddle of America.

That our architecture accurately reflects the spirit of the times is undeniable. These are the days of decline in the power of autocrats. The bosses are building for the workmen and largely at their dictation. The imperialism controlling us and our architecture today is that of the proletariat.

We are now testing the idea of Democracy. It is not so much a question of making the world safe for Democracy as to be sure Democracy is safe for the world.

The change in attitude toward work, the ease of living, the luxury of the general public, the automobile, the moving-picture, the phonograph and the radio, with fluxive restlessness of people going about like nomads—these do not make for style in architecture; style comes from settled public conviction and not from scattered thinking.

Architects cannot make the public appreciate things it does not understand. The saying—"you can lead a horse to water but you cannot make him drink"—is as true as that you can vote for prohibition but you cannot prevent drinking. The public knows what it likes and appears to get it.

The mansion is disappearing, and cottages occupy what was once a beautiful estate. More welfare buildings than palaces are built today. The typical structure is a great mass composed of small units for the use of individuals. The herd instinct is so strong that decentralization seems impossible. Flocking to cities is lowering national vitality. Is this a pernicious imperialism? We cannot avert our fate; we cannot make our architecture other than that expressing our spirit.

The system which produces vast quantities of repeated architectural forms for the commonplace building also gives each workman sanitary appliances as fine in function as those of the millionaire. The common laborer today enjoys luxuries denied the ladies of the courts when they were surrounded by beautiful architecture.

Mass production in designs follows the demand for "big building quick." Many architects have offices of from fifty to one hundred or more assistants, whose work they should vitalize; and all this must be done on the drawing board, for the materials come from widely separated sources ready to assemble in the building. Is it not wonderful that we get any good architecture under these conditions?

This is the spirit of the times and it must and will be expressed in our buildings until the spirit of the nation changes.

A gradual awakening to a sense of beauty is now coming to the American public with great intensity, and architecture will become the most pronounced expression of the new phase of the national spirit. Some day another style will probably develop which will be a beautiful expression of our national spirit, and then we should have an exposition to exemplify it, to give it full form and color and have it sealed by public approval. But it will be slowly evolved on precedent, with growth only in proportion to our genius for architectural design. When precedent is ignored in design, beauty is not a quality of the product, however much of the novelty, logic and cleverness it may show. Let us consider where we were in 1876, where we were in 1893, where we are now, and where we will be in fifty years. Will the spirit which brought us our great material prosperity lead us on to an age of beauty as our next step toward decadence?

WILLIAM A. BORING.

Mr. Mumford's phrase, "The Architecture of Imperialism," is rather a stroke of genius. We have been looking for a comprehensive caption to this particular epoch of architecture, and now we have it; exact, explicit, descriptive. Architecture always has been a very accurate exponent of civilization, and never more so than during the generation that created the Chicago Fair and produced such men as McKim, Burnham, White, Hunt and Carrère, to give it visible showing in artistic form. Imperialism after the Roman fashion, no less; superb, insolent, dominating and potent. It had no relationship to the real things of life, but it controlled and absolutely transformed our national life with its instruments and ideals, and the architecture produced for it, and at its imperial demand, was as expressive in its way as Gothic was of Mediævalism. Perhaps in the latter case the art was finer than the spirit that prompted it (there are those who maintain this); certainly it was so in the former instance, and the great architects of this imperial era cast a certain glamor of fineness and nobility over a thing that was in itself rather coarse in its cynicism and brutality. The White City was a radiant frontispiece, a masque of spiritual death, but in the light of contemporary revelations are the marble State Capitols and the Washington palaces, the railway stations and insurance buildings and Florida villas, yes and the libraries and colleges themselves so very different in their nature and connotation? Aloofness from the real things of life, but splendid, competent and inspiring; this seems to be the kernel of it all.

Mr. Mumford deals with the era as a unit, but he was making his point and was justified. He would be the first to admit that other forces were then in operation, though hiddenly and without much promise at the time. During the very year that saw the consummation of imperial architecture there were the same old three indestructible entities struggling along to maintain themselves and achieve expression; the home, the school and the church; domestic life, education and religion. None of these ever yielded really to imperialism, and the Minnesota Capitol, the New York Public Library, the Educational Building at Albany, Columbia University and the Christian Science Temple in Boston, saw simultaneously the return of Tudor Gothic and Colonial to the colleges, the development of a competent and vital religious art based on Mediæval precedent, and the slow recovery and expansion of types of home-building of the most perfect description.

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Imperialism did not have its own way even then, and now the real things are coming to the front as the old scheme of things decays. Two tendencies show themselves in these days of change when "all things are being made new." The imperialism continues, it is true, with the fever and the headlong rush which presage an end. Society in 1892 was a flimsy confederacy compared with the political, industrial, financial, educational and social imperialism which affects us today, but now the pictorial and romantic qualities of the earlier buccaneers (they had those things in the 19th century) are gone, and in their place are the drab and sober considerations of dividends and utility, engineered by efficiency and "system." The office building is now that and no more, and it has extended its peculiar nature to the city hall, the library, the church. The efficiency expert and the structural engineer in the employ of the "go-getter" now control those architectural destinies which once flowed in imperialism.

But something else is happening. Some of us believe that this ugly mechanism and utilitarianism which have succeeded to the marble realization of the stucco dream of the White City are just the signs of imminent death. And this means the death of social imperialism even more than the death of its architectural expression. Modernism is riding to its fall, but, untroubled by its record and its fate, the three old realities continue their serene development. Now while the anti-social tenement house soars to its maniacal acme in Washington; while the public schools sell out to the devil of standardization and efficiency; while Protestant churches maintain a fictitious vitality by burying themselves in the core of revenue producing office buildings and hotels, still the leaven works; the leaven which was introduced into the imperial lump in those last decades of the 19th century.

Home, schools and churches, the three realities of life, go quietly onward building more stately mansions for the souls and bodies of those who are still faithful, and after the last towers of imperialism have fallen, will show themselves ready and prepare to construct a new world better, and buildings more beautiful, than the old.

RALPH ADAMS CRAM.

"The saddest truth is better than the merriest lie" quoth the late Bishop Spalding. Ordinary folks hesitate before accepting such a statement, and most of us reject it by our lives, no matter what lip-service we may render its principle. The task of interpreting facts in the light of abstract truth has ever been a thankless one. It would be banal to digress with reference to the persecutions which have been suffered by the prophets. It is safe, however, to assume that Lewis Mumford's astonishingly frank and unafraid interpretation of modern civilization and its architecture will inspire some resentment. In *Sticks and Stones* he leaves the safe territory of dead men's bones and, dealing with the living, draws conclusions from what he sees that will not be pleasant in the ears of the adherents of things as they are.

Henry Adams, as he tells us in his *Education,* sought to evaluate modern tendencies by comparison in contrasts with the age which produced Mont St. Michel, Chartres, the Song of Roland, and the "Summa." Mumford compares similarities, and shows us America as Imperial Rome, modernized. The comparison is not new, but Mumford's searching analysis makes former efforts to set up the analogy seem superficial. Poor Adams is revealed in his own writing as an ultra-refined, sensitive soul whose spirit beat its wings in vain against the cage of man's finite limitations. In ever deepening sadness he saw working hypotheses become accepted truths only to be in turn rejected as no longer tenable. His ultimate position was closely allied to despair. Lewis Mumford seems to be made of sterner fibre. He does not draw pessimistic conclusions, but he has faith in the worthwhileness of life and is brave enough to tell us wherein he believes that we have failed. His ideal for America is "a community of free men, living the good life" rather than an empire having "dominion over palm and pine," and we should thank him for holding up the mirror to our social sins against that ideal.

Whatever we may say as to his incisive logical argument and his clear and deep-searching vision, we shall generally admit his fine mastery of the literary tools. His use of illustration is apt and illuminating, and suggests the student of history by the modern method which begins where others leave off. The true history of the race, if it is ever finally written, will be a synthesis of the results of all forms of human thought and activity. Mumford's book as a human document will take a secure place in the literature that goes beyond Architecture or any other single phase of man's self expression. Men who are striving to measure either our progress or our retrogression may not safely pass it by.

WILLIAM L. STEELE.

The Secretary's Page

37. CHAPTER REPORTS: The Secretary is unable to say that he is particularly satisfied with the reports from the various Chapters either by bulletin or by copies of the minutes. The Secretary would like to make a confession to the other Chapter Secretaries to the effect that he was told that it would be practically impossible to get the Chapter Secretaries to send in reports of their meetings and that in his simple ignorance he doubted the statement. His doubt still remains but the events to date tend to prove the statement made to him.

He has in front of him, as the result of two months, bulletins and copies of minutes from the following Chapters: BALTIMORE, WASHINGTON STATE, CENTRAL ILLINOIS, NEBRASKA, SAN FRANCISCO, COLUMBUS, PITTSBURGH, GEORGIA, CHICAGO, NEW YORK, BOSTON, KENTUCKY, WISCONSIN, and the Illinois Society Bulletin. The fact that those Chapters who have printed bulletins are able to put the Secretary's office on their mailing list and thus insure regularity is a big argument in favor of printed bulletins, but the smaller Chapters, of course,

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cannot afford this. The Secretary, therefore, urges upon them the thought of having enough copies made of their minutes so they can be sent in regularly.

The Secretary would prefer it if they were sent in every month, rather than as is still the habit of many sending in the accumulated minutes of several meetings.

Where Chapters are within close touch of each other the Secretary recommends joint meetings from time to time, such as BALTIMORE and WASHINGTON, D. C., announced for June. BALTIMORE also is doing an interesting thing in holding a special exhibition of the drawings of the City College Competition.

38. ATTENDANCE AT CHAPTER MEETINGS: The matter of good attendance at Chapter meetings seems to be a crucial point of interest with all Chapters, and they are all endeavoring to solve it in various ways. The Secretary wonders why it is that the experience of one Chapter seems to be of no value when applied to another Chapter, although every Chapter Executive Committee is led into a new line of action by what occurs in another Chapter. This is particularly illuminating in the matter of Chapter headquarters. The CHICAGO CHAPTER and the Illinois Society have combined on the proposition of securing permanent headquarters for both organizations, and to insure the success of this, have gone so far as to authorize the formation of a separate holding company, if necessary, to purchase house and land where such headquarters can be maintained. NEW YORK is discussing the matter of permanent headquarters. MINNESOTA, which has had permanent headquarters for a number of years, has abandoned them and is now going to try the method of holding dinner meetings at various places. The Secretary has no answer to this whole proposition other than the simple suggestion to all members of the Institute that they sacrifice themselves to the extent of devoting the few hours required for a Chapter meeting once a month to that particular purpose. If the meetings do not prove interesting to them, why not let the Secretary of the Chapter, or the Executive Committee, know wherein they lack interest and by a little co-operation and the careful selection of the proper committee chairmen get what they desire in the matter of interest?

39. ADVERTISING: The Secretary wishes to call the attention of all the members of the Institute to the pronouncement of the Institute in connection with the issuing of catalogs, or books, or pamphlets, supported by advertisements. Please look at A. I. A. Document No. 192, a Circular of Advice relative to Principles of Professional Practice. To save trouble the Secretary herein again quotes Paragraph 9:

"The issuance by an architect of a professional treatise or a monograph of his work in the form of a book or pamphlet which is supported by advertisements, whether privately printed or published through regular channels, tends to lower the dignity and standing of the profession and is to be condemned."

There is an advertising company making a specialty of providing catalogs for those architects who desire them; it issues a very attractive line of argument tempting the architect to indulge in its wares, and unless the architect considers all sides of the question he may succumb to this very plausible temptation.

The Secretary wishes to call attention once more to the fact that the 56th Convention once more emphasized the matter, and had the incident, which has just come to his attention, happened a few months earlier, it would again have been a subject for the 57th Convention.

40. STANDARD STATE ZONING ENABLING ACT: The Secretary wishes to call the attention of the members of the Institute, who are interested in the zoning conditions within their territory, to the fact that the Department of Commerce has just issued a very valuable pamphlet entitled, ***A Standard State Zoning Enabling Act,*** and this should be in the possession of every architect. This was published by the Advisory Committee on Zoning of the Department of Commerce, a Committee chosen with the usual thoroughness and care exhibited by the Secretary of Commerce in all his work, and should be obtained from the Superintendent of Documents, Printing Office, Washington, D. C. The price is five cents per a single copy, with suitable reductions for larger quantities.

EDWIN H. BROWN, *Secretary.*

Public Information

The program of the Public Information Committee for the coming year has begun to shape itself. A professional director of press work is to be employed for the whole year. Possibly an arrangement may be made by which the man in charge of this will devote all of his time to Institute activities. Details of the arrangement will be published later.

The first report of the Committee on Uneconomic Practices in the Building Trades of the NEW YORK CHAPTER has elicited considerable comment. The CONNECTICUT CHAPTER has asked for copies of the report so that it may send one to each member and the New York Building Congress has also asked for copies for distribution. The Chapter's Committee still has on hand about one hundred copies and would be glad to send one to any member who is interested. Address Mr. Arthur C. Holden, 101 Park Avenue, New York City, Secretary of the Committee. The Committee is now engaged on the second stage of its work, a special study of important phases touched upon in the first section.

The attention of members is also called to the very important paper published in the JOURNAL in July and dealing with "The Letting of Contracts." This is a very vital contribution to the problems of architectural practice and is significant of the splendid work being done by the Congress of the Building Industry in various sections.

Once more, the Public Information Committee calls attention to the fact that summer is a particularly good time to bring out news bearing upon architecture.

The Chairman would consider it a special favor if the Chapter Public Information Committees, indeed, if each member of the Institute would send to him suggestions for the activities of the Institute Committee during the year. It is almost impossible for the Committee to divine the special needs of different sections of the country and the initiative should really be taken by those who are in touch with local conditions.

JOHN V. VAN PELT, *Chairman,*
126 East 59th St., New York City.

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Committee Appointments

The complete personnel of the Committees of the Institute for 1924-5 is not yet available, but in addition to those already published we are able to announce the following Chairmen of Committees:

Jury of Fellows, H. H. Kendall, *Boston;* Education, George C. Nimmons, *Chicago;* Industrial Relations, Robert D. Kohn, *New York City;* Architectural Relations, Harry T. Stephens, *Paterson, N. J.;* Contracts, Thomas E. Snook, *New York City;* Allied Arts, J. Monroe Hewlett, *New York City;* Public Works, Milton B. Medary, Jr., *Philadelphia;* Public Information, John V. Van Pelt, *New York City;* Structural Service, N. Max Dunning, *Chicago;* Community Planning, Clarence S. Stein, *New York City;* School Building Measurements, C. B. J. Snyder, *New York City;* Foreign Relations, William Emerson, *Boston.*

It is also announced that the New York Office of the Institute is now at 19 West 44th Street, which is likewise the office of the Committee on Structural Service and the Producers' Research Council, and also the official headquarters of the New York Chapter.

Delegates

The President appointed the following members, now in Europe, as delegates to the International Town Planning Conference in Amsterdam (July), and the International Conference on Education, in London, (July):

Leon Arnal, William A. Boring, F. H. Bosworth, Jr., Frank A. Bowne, William Emerson, Julian C. Levi, William H. Schuchardt, Clarence S. Stein, Hobart B. Upjohn, Henry Wright.

Obituary

William D. Hewitt, F.A.I.A.

Elected to Associate Membership in the Institute in 1901
Elected to Fellowship in 1909
Died at Philadelphia, Pa., 23 April, 1924

With the death of Wm. D. Hewitt, Philadelphia has lost one of her oldest and best known architects. The firm of G. W. & W. D. Hewitt, so well known to an older generation, was founded 52 years ago and reached the culmination of its work in the late nineties and early part of this century. Two of the largest buildings done by this firm were the Philadelphia Bourse and the Bellevue-Stratford Hotel. They built over fifty churches, mostly in the Victorian Gothic style, in various parts of the country. The Devon Inn and the Wissahickon Inn show the strong leaning of this firm toward the English style and all through their work, especially those buildings largely due to the creative ability of William D. Hewitt, there was a saneness of design and simplicity of plan that ever marks his work, which was robust and free from mannerisms and bespoke a grasp of the problem which, ignoring unnecessary frills, reached for the solid essentials.

While Mr. Hewitt's work showed little influence of the Beaux-Arts School, which was to be expected of a man who got first inspirations from Frank Furness, still I know of no architect more concerned with the proper development of the plan as the necessary starting point in the design than he. Prout's saying, that if the plan be straightforward and logical and solve the problem at hand, then the elevations would take care of themselves, seemed to be ingrained in Mr. Hewitt's work.

Whether a large residence on the Main Line, a bank in Burlington, a church in Allentown, or a hospital in Philadelphia, in English Gothic, or Classic, or French or Renaissance, through them all runs the same sterling note, a straightforward, simple plan with the elevation rather massive and the details strong and at times almost coarse, but never frivolous or effeminate.

It is only necessary to consider the large amount of work done by Mr. Hewitt to realize how successful he was as an architect, but as a man he was even more successful if one is to judge by personal worth and sterling character; indeed to me he always seemed to have some of the qualities of Lincoln, big-hearted, generous, self-effacing, with a keen sense of humor and a fund of anecdote.

Just about a year ago the Philadelphia Chapter tendered a dinner and presented a loving cup to Mr. Hewitt, a former president of the Philadelphia Chapter, upon the completion of his fifty years of unbroken membership. On that occasion he was full of life and vitality and responded to one of the toasts with a song; now his song is hushed and we have only the memory, but in these days of strenuous competition that memory is inspiring, breathing of simplicity and sincerity of character.

Mr. Hewitt was born in Burlington, N. J., about 76 years ago, and was educated at Burlington College and the Polytechnic Institute of Philadelphia, receiving his degree a few months before his graduation to enable him to respond to the call for troops before the battle of Gettysburg.

Later he travelled and studied in Europe and for a number of years was head draftsman for Furness & Hewitt. The late Louis Sullivan in his *Autobiography of an Idea* refers to the favorable impression that Bill (only he miscalled him John) made upon him on his entering the office of Mr. Furness. He particularly referred to Mr. Hewitt's charming way of illustrating his ideas with very clever and crisp sketches.

From this position Mr. Hewitt later formed a partnership with his brother George, which lasted until about 1902 when his brother retired. The firm became Hewitt, Stevens & Paist, which was succeeded by Hewitt and Granger and, in 1917, by Hewitt & Ash. Mr. Hewitt was indefatigable in his attention to his work and was busy until the very end. His hobby was hunting and fishing and he had at one time a fine collection of rifles; his idea of a real vacation was a trip in the woods of Maine or Canada, not only for the game, but for the enjoyment of the out-of-door life.

In the passing of Mr. Hewitt, Philadelphia who knew him has lost much, and the architects a friend in whom there was no guile.

PERCY ASH.

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The Allied Architects' Association of Los Angeles—I

IN JULY, 1921, in Los Angeles, there was founded an Association of prominent Architects who were following the natural instinct of mankind to unite in working for a common cause.

These thirty-three Charter Members of the Allied Architects' Association of Los Angeles believed it was possible to submerge their individual interests and to work as allies to produce architecture of the highest possible character in public structures. By combining the experience and ability of competent men in one well directed organization, they believed that such an Association could provide architectural service to the municipality, the county, the state and the National Government to obtain the best results at the least possible cost.

The plan and the ideal of this Organization are expressed in the By-Laws, which state: "The Paramount purpose of this Association is to advance the art of Architecture, and by professional cooperation and collaboration to secure for and provide municipal, county, state and national governments and organizations formed for civic betterment, or mutual or business advancement with the highest and best expression of the profession of architecture at the least possible cost in the design and construction of buildings, structures and improvements. . . ."

Administration

The business and the property of this Association is managed, handled and controlled by the Board of Directors; it has no capital stock. The rights, interests, privileges and liabilities of every member are equal, and no member can have or acquire a greater interest therein, nor be subject to a greater liability, than any other member. A member is without interest in the assets of the Association other than that conferred by his membership; on termination of membership for any reason, all rights and interests of the member in the assets of the Association cease.

The administration of the work of the Association and the operation of its departments are in accordance with the most efficient and economical practice; its chief divergence from the ordinary practice is its machinery for securing the collective criticism and service of its members.

Its many members with many individualities and talents are delegated to such work as will best serve the Association, and yet all members have an opportunity to function in the great problems of public buildings, an opportunity which does not come to the majority of architects. So, without prejudice to the individual, this comprehensive membership supplies in every branch of architectural work a collective service that no private individual, firm or corporation combines.

By the method of procedure of the Association, each member is given an opportunity to present his own ideas for each new project in the form of a sketch. Through the consideration of these esquisses and their development, the membership arrives at a final design after frank criticism and judgment. New ideas and individual tastes refresh and stimulate the development of the design, and the interchange of thought has been found to be of inestimable educational value to all the members. Fundamental principles of design are constantly kept in mind and constantly referred to. The process is not unlike a competition, with the membership as a whole acting as the judges. The ultimate meeting of minds tends to prove that men instinctively work in unison for a common cause.

Development Work

The obligation expressed in the Articles of Incorporation, "to advance the Art of Architecture," carries with it the important duty of rendering help to the younger generation of architects, students and draftsmen; of educating the public to desire better architecture, to secure the means for its accomplishment and to appreciate the value of the Services of the Architect to the Community; and of distributing literature and information pertaining to Art and Architecture.

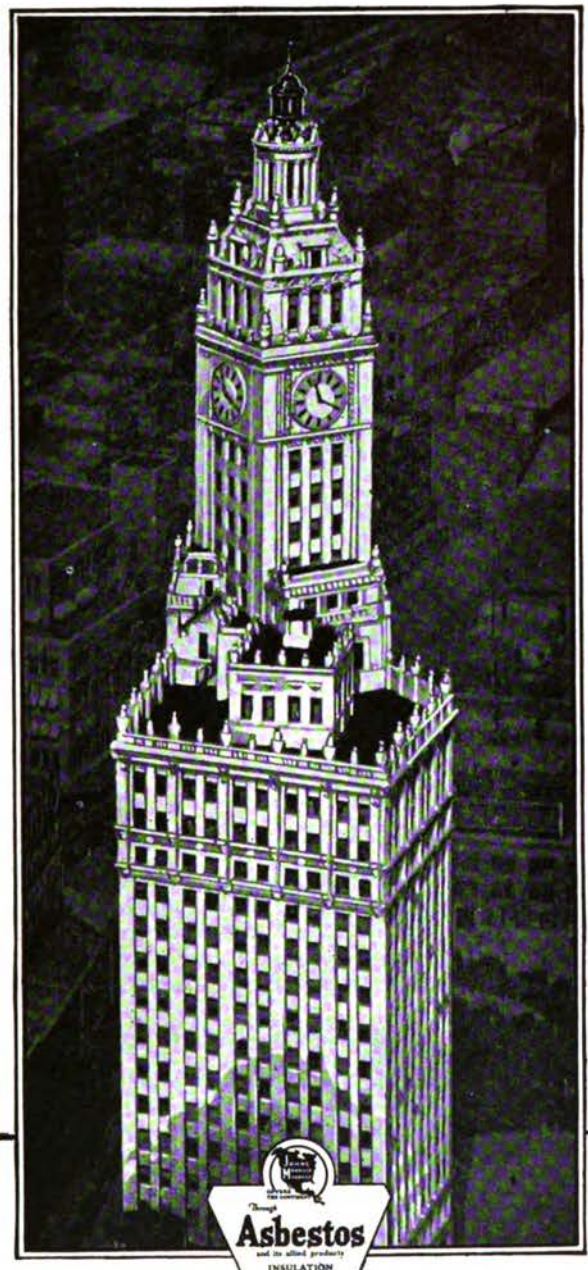
With this in view a department of the Association has been organized which has already developed an Architectural and Fine Arts Library, available for the use of members, employees and the public, and which has already issued in generous quantities books for the use of educational institutions.

In publicity work and in published articles this Development Department has constantly in mind the returns which result from a better knowledge by the public of the ethics, status and functions of the Architect as outlined by the American Institute of Architects. Through a carefully chosen list of periodicals it is illustrating better homes and presenting examples of the best in architecture and art. Without prejudice to any individual, its publicity work shows what the services of the Architect mean to the public. The Department is striving to extend the usefulness and helpfulness of the Association to include all those who pledge themselves with sincerity and devotion to architecture and the allied arts.

In subsequent issues, this page of the JOURNAL will explain the procedure and performance of the Allied Architects' Association of Los Angeles; the professional work it has already undertaken, and by what methods it arrives at the design and the administration of the commissions entrusted to it by the Public.

The widespread interest evinced in the Allied Architects' Association of Los Angeles, the form of its organization and the scope and method of its activities, has induced us to place this page at the disposal of the Association in order that it may set forth in detail the nature of its work and the objects it seeks.

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Asbestos is the only mineral fibre used in manufacturing roofing felts. Because it is a mineral, it will not burn or rot—it does not deteriorate in any way. For this reason it possesses decided advantage over animal or vegetable fibre felts as a roofing material.

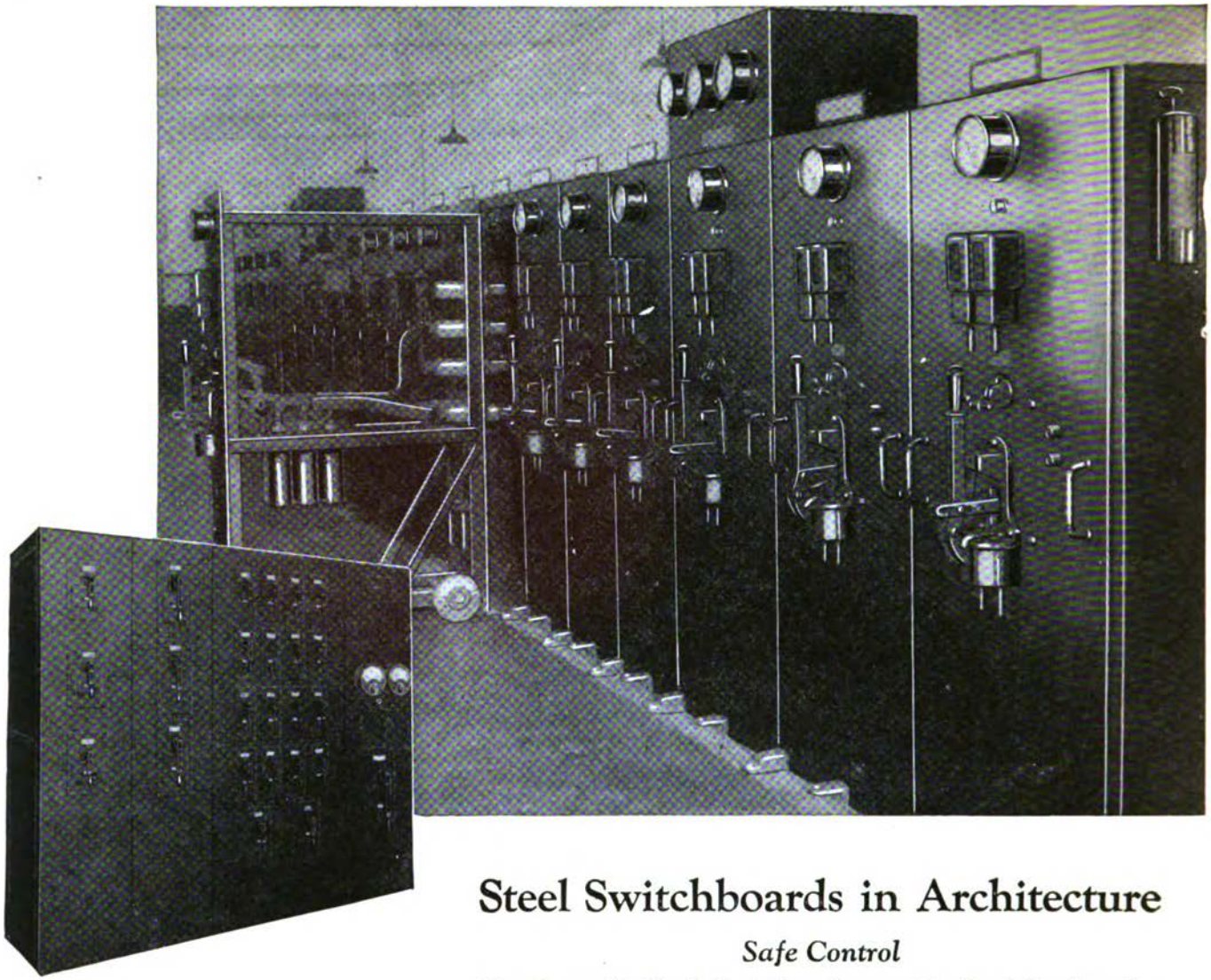
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Steel Switchboards in Architecture

Safe Control

The Removable-Truck Switchboard was originally designed so that high potential electric circuits could be safely controlled by operators having insufficient education and experience in electrical matters. As such they were particularly applicable to industrial plants employing a considerable percentage of alien labor.

Continuity of Service

The readiness with which an individual panel could be removed and replaced was almost immediately recognized also by large power generating companies as of vital importance where minutes and seconds make or mar a record for continuity of service. The demand thus created forced us to make this design almost as flexible as that of our marble or slate switchboards.

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When labor is scarce and expensive and the time for erection short, the advantages of a switchboard completely assembled by the manufacturer are apparent. The initial cost of a Removable-Truck Switchboard is approximately 25% greater than that of a slateboard for similar service. In many cases, however, the installation cost will be low enough to offset this differential, for installation consists of fastening the rails, connecting the lines to the proper terminal and rolling the truck into place.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

The Lighting of Paper and Pulp Mills (31f13) (*Edison Lamp Works. Bulletin L. D.* 140. *Size* 6" x 9". *Pages* 20. *Illustrated.*) *Synopsis.* Necessity for good lighting. What constitutes good lighting. Pulp making. Paper making. Machine room. Finishing Room. Maintenance.

BIBLIOGRAPHY:

Paper Mill Lighting, R. E. Simpson, Travelers' Insurance Company's Bulletin, 1914. *Paper Mill Lighting,* H. T. Spaulding, American Pulp and Paper Mill Superintendents' Association, July, 1919, Green Bay, Wis. *Lighting for Paper Mills,* H. T. Spaulding, American Pulp and Paper Mill Superintendents' Association, Glens Falls, New York, 1920.

Dairy Barn Construction (35-L) (*U. S. Dept. of Agriculture. Farmers' Bulletin No.* 1342. *By K. E. Parks, Dairy Engineer. Bureau of Animal Industry. Pages* 22. *Size* 6" x 9." *Illustrated*).

Contents.—Type of barn to select. The building site. Essential features in dairy barn construction, light, air space, ventilating system, cow stalls, stanchions, stable floor, stable equipment, water supply, types of dairy barns. The one-story cow stable. The two-story dairy barn. Blue prints of dairy buildings. Considerations on cost of construction.

Fish Ponds on Farms (38) (*U. S. Department of Commerce, Bureau of Fisheries. Document No.* 826. *By Robert S. Johnson and M. F. Stapleton. Pages* 35. *Size* 6" x 9". *Illustrated.*) The propagation of fish on farms in artificially constructed ponds or in natural ponds of limited area is perfectly feasible and with proper management such ponds will afford a convenient and economical food supply that will justify the expense of their construction, preparation and maintenance.

It is the purpose of this report to point out briefly the essential features to be considered in the location of a site, the construction of the pond and its operation, and the care of the fish contained therein.

Asphalt, Simplified Practice Recommendation Number 4 (12a12) (*U. S. Department of Commerce—Issued by the Bureau of Standards, 1 January,* 1924.) The United States Department of Commerce, through the Bureau of Standards, recommends that recognized varieties of paving asphalt be reduced to those shown in the following tables.

(1) For construction of sheet asphalt, asphaltic concrete, and asphalt macadam pavements, and also for surface treatment. Penetration Limits.—25 to 30, 30 to 40, 40 to 50, 50 to 60, 60 to 70, 85 to 100, 100 to 120, 120 to 150, 150 to 200.

(2) For joint filler for various types of construction: Penetration Limits.—30 to 50, 50 to 60, 60 to 70, 85 to 100. The first is used primarily for brick pavements, and does not require the admixture of sand, whereas the latter three, which are identical with three of the grades adopted for asphalt pavement construction, are those which would ordinarily be used in admixture with sand to produce an asphalt grout.

(3) In adopting these limits, it is understood that the producer will furnish asphalt with penetration equal to the mid-point in each range, a plus and minus tolerance from that mid-point being acceptable to all parties, but in no case shall the deviation exceed the limits of the grade specified.

This recommendation became effective on all deliveries of material after 1 January, 1924.

Survey of the Field.—Some very interesting data resulted from the survey as conducted by the division. Out of 22 forms of inquiry 14 manufacturers reported 88 varieties of asphalt being used for paving purposes, with 14 varieties for brick and stone filler. Over 80 per cent of the production of these 14 manufacturers, however, was centered upon approximately 10 varieties.

For construction ranging in type from asphalt macadam penetration to sheet asphalt pavement the survey showed 9 grades of material are ample, but under present conditions of non-uniformity on specification requirements more than 80 grades are called for. This naturally adds a host of complexities to the operation of the refineries, not only in running the stills but also in the necessity of enlarged storage space for stocks of different grades. In the aggregate, therefore, the economic loss becomes large.

U. S. Govt. Specifications for Gloss Interior Lithopone Paint. White and Light tints (25b22) (*Federal Specifications Board, Standard Specification Number* 67. *Circular of the Bureau of Standards No.* 147. *Pages* 8. *Size* 7x10.)

General.—This specification covers ready-mixed lithopone paints, frequently known as gloss mill white, in white and a variety of light tints. Paints under this specification are not intended for outside exposure. They shall dry to gloss opaque coats which will adhere well to wood, metal and plaster, stand washing with soap and water, and show no material change in color on exposure to light or material yellowing when kept in the dark.

The paint shall be purchased by volume (231 cubic inches to the gallon).

(A) *Pigment.*—The pigment shall consist of:

	Maximum	*Minimum*
Lithopone*		65%
Zinc Oxide		20%
Tinting and extending pigments	5.0%	
Material soluble in water	0.8%	

In no case shall the sum of zinc oxide and lithopone be less than 95%.

(B) *Liquid.*—The liquid portion of the paint shall consist of treated drying oils or varnish, or a mixture thereof, and turpentine or volatile mineral spirits, or a mixture thereof, in such proportions as to insure not less than 60% of nonvolatile vehicle. The nonvolatile vehicle shall dry to a tough and elastic film.

(C) *Paint.*—The paint shall be well ground, shall not settle badly, cake or thicken in the container, shall be readily broken up with a paddle to a smooth, uniform paint of brushing consistency, and shall dry within 24 hours to a varnish gloss finish without streaking, running, or sagging, and free from laps and brush marks. The color and hiding power when specified shall be equal to those of a sample mutually agreed upon by buyer and seller. After drying for not less than five days marks made on the painted surface with a soft lead pencil shall be easily removed by washing with soap and warm water without appreciably marring

* The lithopone used must contain not less than 26% of zinc sulphide and must not darken on exposure.

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the paint surface. The weight per gallon shall be not less than 12½ pounds. The paint shall consist of:

	Maximum	*Minimum*
Pigment	60%	50%
Liquid (containing at least 60% non-volatile matter)	50%	40%
Water	1%	
Coarse particles and "skins" (total residue retained on No. 325 screen based on pigment)	0.5%	

NOTE.—This specification also includes sampling, laboratory examination, analysis of pigment, reagents.

Economic Value of Admixtures to Concrete (3b) (*Technical News Bulletin Number* 83. *Bureau of Standards*). A paper entitled *The Economic Value of Admixtures* was presented at the meeting of the American Concrete Institute last month by Mr. J. C. Pearson. The paper reports the results of an investigation conducted at the Bureau of Standards on the effects of admixtures in concrete mixtures. Diatomaceous earth (celite), kaolin and hydrated lime, and three accelerators of the calcium chloride type were added in different amounts to the several basic concrete mixes.

The results of the tests show that the workability of a concrete mixture is about equally benefited by one part of celite, two parts of kaolin or three parts of hydrated lime, such as used in these tests, if the consistency as measured by the flow table is kept constant. Under the same conditions plain calcium chloride did not improve the workability whereas of the two proprietary materials used, one was found to give a very appreciable improvement and the other quite a marked improvement.

The powdered admixtures in the proportions used did not seriously affect the strength of 1:2:4 or leaner concretes; in fact the 1:3:6 concretes were benefited by the admixtures in all cases. Considerable reduction in strength resulted from the larger proportions of the admixtures in the 1:1½:3 concrete. The chloride admixtures without exception produced a considerable increase in strength.

As a guide to the "judicious use" of powdered admixtures the tests indicate that the amount of an admixture to be recommended is an inverse function of the richness of the mixture. For the materials used in this investigation, the maximum percentage of celite to weight of cement is approximately the number of parts of coarse aggregate (relative to the cement) used in the mixture; the maximum percentage of kaolin is about twice the number of parts of coarse aggregate and the minimum amount of hydrated lime about three times this figure.

As better and more economical concrete must result from the use of anything that improves the workability of the mixture provided no deleterious effect is also involved it is felt that the data from these tests justify a more general consideration of the proper use of admixtures in concrete.

Metal Lath—Simplified Practice Recommendation Number 3 (20b12) (*Accepted by American Institute of Architects; Associated General Contractors of America; Associated Metal Lath Mfrs.; National Association of Building Trades Employers; National Builders' Supply Association; Operative Plasterers' and Cement Finishers' International Association; The American Specification Institute; Wood, Wire and Metal Lathers' International Union; Department of Commerce.*)

In accordance with the unanimous action of the joint conference of representatives of manufacturers, distributors and users, the United States Department of Commerce, through the Bureau of Standards, recommends that recognized sizes and varieties of metal lath be reduced to the following:

Section I.—Flat Expanded Metal Lath.

Weight in lbs. per square yard of—			Gauges of Sheets (U. S. Standard[1])	
Painted Steel	*Special Metal*	*Sheets galvanized before fabrication*	*Minimum*	*Maximum*
2.2	2.2	——	28	26
2.5	2.5	2.5	28	26
3.0	3.0		28	24
3.4	3.4	3.4	26	24

Section II.—⅜ inch Rib Expanded Metal Lath.

Weight in lbs. per square yard of—		Gauges of Sheets (U. S. Standard[1])	
Painted Steel	*Special Metals*	*Minimum*	*Maximum*
2.5	——	28	26
3.0	3.0	28	26
3.5	3.5	27	24
4.0	——	26	24

Gauge number	*Weight per square foot lbs.*	*Approximate Thickness for steel*
24	1.0000	inch 0.0245
25	.8750	.0214
26	.7500	.0184
27	.6875	.0169
28	.6250	.0153

Section III.—Flat Rib Expanded Metal Lath.

Weight in lbs. per square yard of—		Gauges of Sheets (U. S. Standard[1])	
Painted Steel	*Special Metals*	*Minimum*	*Maximum*
2.75	2.75	30	28
3.20	3.20	30	28
3.75	3.75	29	24
4.00	4.00	28	24

Section IV.—Sheet Lath.—Painted steel lath is to weigh not less than 4.5 pounds per square yard, with corresponding minimum weights in this type of lath made from special metals or from sheets galvanized before fabrication.

Section V.—Expanded and Sheets.—Metal lath in all types and weights galvanized after fabrication is to be eliminated.

Section VI.—The industry is to make every effort to direct practice to a consolidation of the pairs of bracketed sizes, Sections I and II, in a single weight to replace each pair; this is to be made effective if possible at the 1924 conference.

Section VII.—All types of lath are to be specified and sold by weight per square yard.

Section VIII.—Manufacturers accepting this recommendation, and who so desire, may stamp or tag their product, "Made in accordance with U. S. Department of Commerce Simplified Practice Recommendation No. 3."

Section IX.—The provisions of this recommendation are to become effective 1 July, 1924.

[1] United States Standard Gauge for Sheet and Plate Iron and Steel.

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A Little Tour in Spain

Toledo

Photographs by the Author

OF all Spanish cities, Toledo, seated in the heart of Castile, is undoubtedly the most famous and the most characteristically typical in its art and history. It is older than the records of men, and the facts of its origin are shrouded in the mists of fable. When its hills first appeared out of the receding waters of the flood, Tubal, the grandson of Noah, chose them as the site of a city, say some. Others declare that the Jews flying from Nebuchadnezzar sought refuge here. At any rate, Toledo was venerable when it was discovered and seized by the Roman invaders before the Christian era. Afterward it became the capital of the kingdom of the Visigoths, and for nearly four centuries it was held by the Moors. It marked the northernmost point of their penetration, and its conquest in 1085 by Alphonso VI and the Cid Campeador gave fresh heart to the Catholic Crusaders. More than any other Spanish city it reveals today the composite characteristics of the various factions that have invested it. In the veins of the Toledan is mingled the blood of Roman and Goth, of Arab and Christian and Jew. Some tincture of this fusion is evident in the maze of the city's narrow streets, its massive walls and its transformed mosques and synagogues.

Thus Toledo has become a kind of symbol of the national character and owes its romantic distinction, in a land made up of rival kingdoms and still divided into provinces each marked by vigorous traits of local self-consciousness, largely to the triumphs of Alphonso VI and the great Spanish champion. From the day of their entry into the city, the power of the Catholic church waxed stronger and more confident. The Archbishop of Toledo became primate of all Spain, and a long line of powerful prelates controlled the destinies of the state. It was a Cardinal Archbishop of Toledo (Mendoza) who dominated the struggle against Granada, and under whose powerful impetus the last remaining Moorish citadel was overcome. And though the fiat of Philip II in 1560 established the capital permanently at Madrid, that upstart city is but a capital of compromise and whim. The primacy of Toledo has survived the vicissitudes of politics and by the common consent of mankind, Toledo remains the spiritual and romantic capital of Spain.

Much of the great wealth of the church in the 15th and 16th centuries was concentrated here and the Cathedral called by the Spaniards *La rica* to differentiate it from Leon *La bella,* Salamanca *La fuerte* and Seville *La grande,* is a treasure house filled to overflowing with the spoils of power.

The great view of Toledo is very like Greco's famous picture with the Puente de San Martin in the foreground as one looks across the gorge of the Tagus. The rocky hill on which the city stands falls here to the river's edge in sharp and wild disorder. The spire of the Cathedral rises thinly like a spikey flêche in the center. The heavy mass of the Alcazar terminates the panorama on the right and the Church of San Juan de Los Reyes on the left, while between them lies the huddle of the town with its churches, its synagogues, its stark walls and rusty roofs. This is not, however, the view that first greets the traveler who comes from Madrid. If he comes by train, he alights at the little station across the river above the Alcántara bridge and is immediately besieged by a swarm of voluntary guides, mostly little boys, who buzz about, hang at his heels, dance before him and strive in every way to spoil the fine effect of the piled up walls, the long ramps and stony steps which confront him at the other end of the great bridge. Our first glimpse was neither of these, for motoring along the highway we could see the city far off in the clear air, and missed in this perspective some of the effect of its hilly grandeur.

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TOLEDO—PUENTE DE ALCÁNTARA

We had set out early one Sunday morning, three of us, to make a little excursion through Castile. Leaving the capital with its modern official air, its ornate state buildings, its great hotels and pretentious attempts at city planning behind us, we sped along the smooth highway that cuts the barren plain which surrounds Madrid like a desert. The little villages through which we passed were mean and without interest, but we stopped at Illescas to see Greco's fine portrait of San Ildefonso in the convent church of La Caridad. The church owes much to Ildefonso for his valiant advocacy of the doctrine of the Immaculate Conception, and he is said to have received special marks of gratitude from the Blessed Virgin herself. She invested him with the cassock and came down from Heaven to attend matins in his company. The name and fame of Greco have become almost synonymous with the spirit of Toledo, and Maurice Barrés has sought in the contemplation of his works to fathom the secret of the city's mystic charm. The portrait of San Ildefonso is one of the graver and less highly wrought examples of his genius. It is freer from the mannerisms which his critics have striven to explain either by dementia or by a conscious effort to individualize his work and differentiate it from that of his Venetian masters. There is a calm serenity about the portrait of the saint, a temperate richness in the color not to be found in some of the painter's other and more violently agitated compositions.

As we drew near the environs of the city, the great mass of the sixteenth century hospital of San Juan da Bautista rose before us. Here we stopped and Byne renewed acquaintance with the pious sister in charge. She proudly showed us the old pharmacy with its painted compartments of healing herbs, its long militant rows of medicine jars looking as heroic as the remedies they held. The enormous patio of the hospital is divided in two parts by a colonnade leading to the chapel, which is really a great church, cruciform in plan with a lofty dome over the crossing. Below the dome is the fine monument of Archbishop Juan de Tavera, the founder, by Berruguete, and to the right of the altar his portrait by El Greco hangs. There are other pictures by the same painter, but none of the first importance. The place on the whole is depressing. Its classic forms are scholastic and correct; but it is all as dry as the herbs in the pharmacy, a relic of sixteenth century formalism; a pompous and gloomy tribute to the power of the church secure in the consolidation of its hard-won victories. Not in its late renaissance monuments is the charm of Toledo to be felt, but rather in the surviving relics of Gothic and Moorish workmanship; in the traces of alien motives and in the clash and transfusion of opposing forces.

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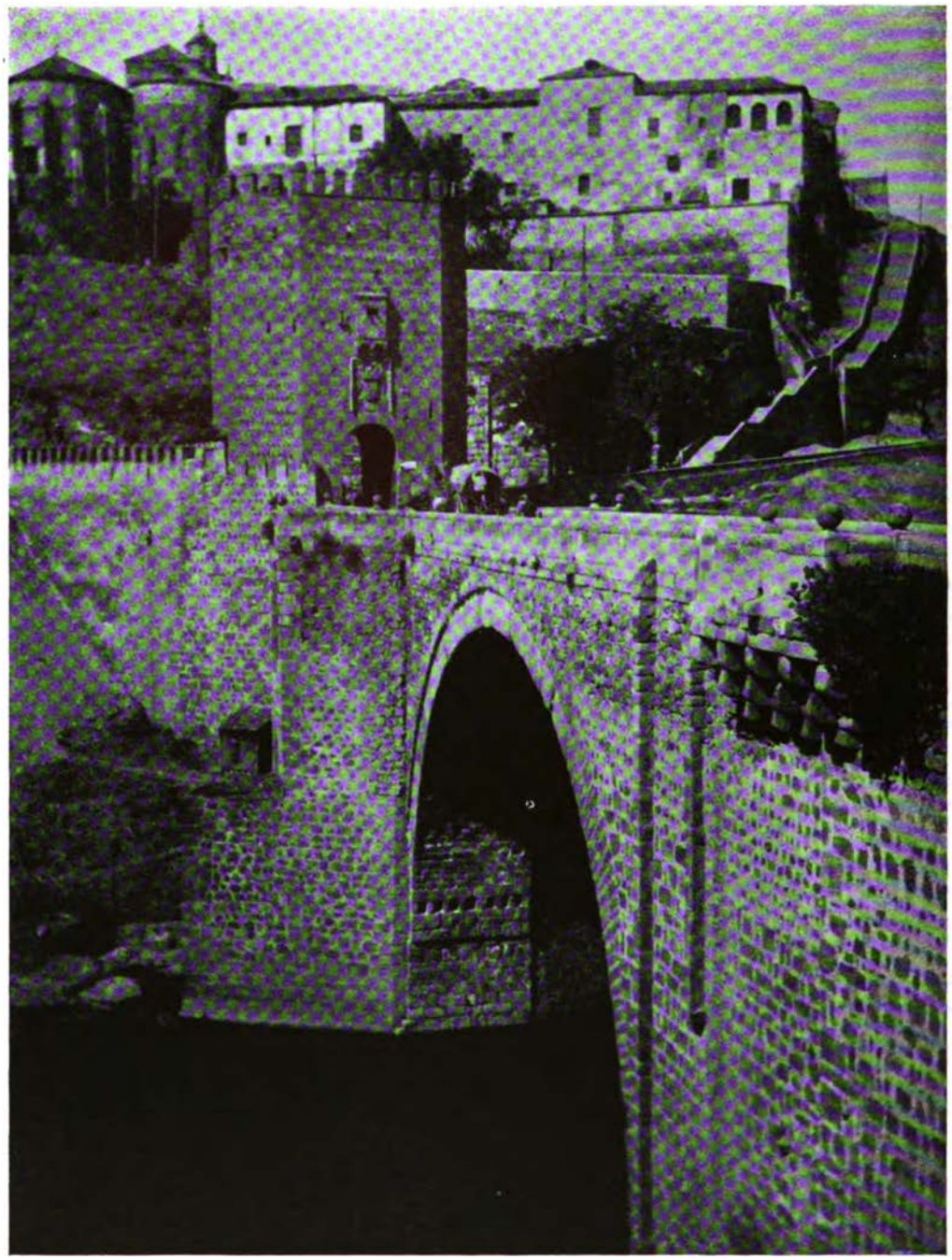


TOLEDO—PUENTE DE ALCÁNTARA

We entered the city through the Puerta Visagra standing at the outer walls near the earlier Arab gateway called Visagra likewise. With the double eagle of the great Charles Quint over its arch between two massive round towers, it has a kind of brutal force, but it does not compare in interest with the old Mudejar Puerta del Sol built about 1100 in the period of transition by the conquered Moorish workmen who were allowed and even encouraged to cling to their traditions. Within the walls the twisting narrow streets protested our progress. Their windings and turnings were cunningly designed to baffle us. The old houses on either side seemed to crowd closer together to bar the way, but by some magic blend of tact, clairvoyance, skill and clever dodging we managed to find our way to the little open space in front of our hotel. The mere presence of the car was an anachronism and, moreover, this triumph achieved, its usefulness was ended for the duration of our stay. It was a glittering morning with a cool, sharp freshness in the air, and there was no lack of life in the narrow streets and the Zocodover. The murmur of it was soft and gentle; the movement quiet and sedate. The tinkle of a donkey's bell, the low cry of his master or the shuffle of a little cavalcade were its rhythmic punctuations. Across the Puente de Alcántara there was a constant coming and going, carts from the country, burros almost invisible under great saddle bags, girls and old women carrying the earthen jars which they had awaited their turn to fill at the well on the other side of the river. Idlers leaned against the parapet watching the bathers far below. The arch of the western tower framed the great Baroque gateway at the east end of the bridge and the ruins of the Castello de San Servando black and gaunt against the horizon on its jagged hill. From the eastern end we looked back across the muddy Tagus to the barren mass of the Alcazar with its square-cornered turrets.

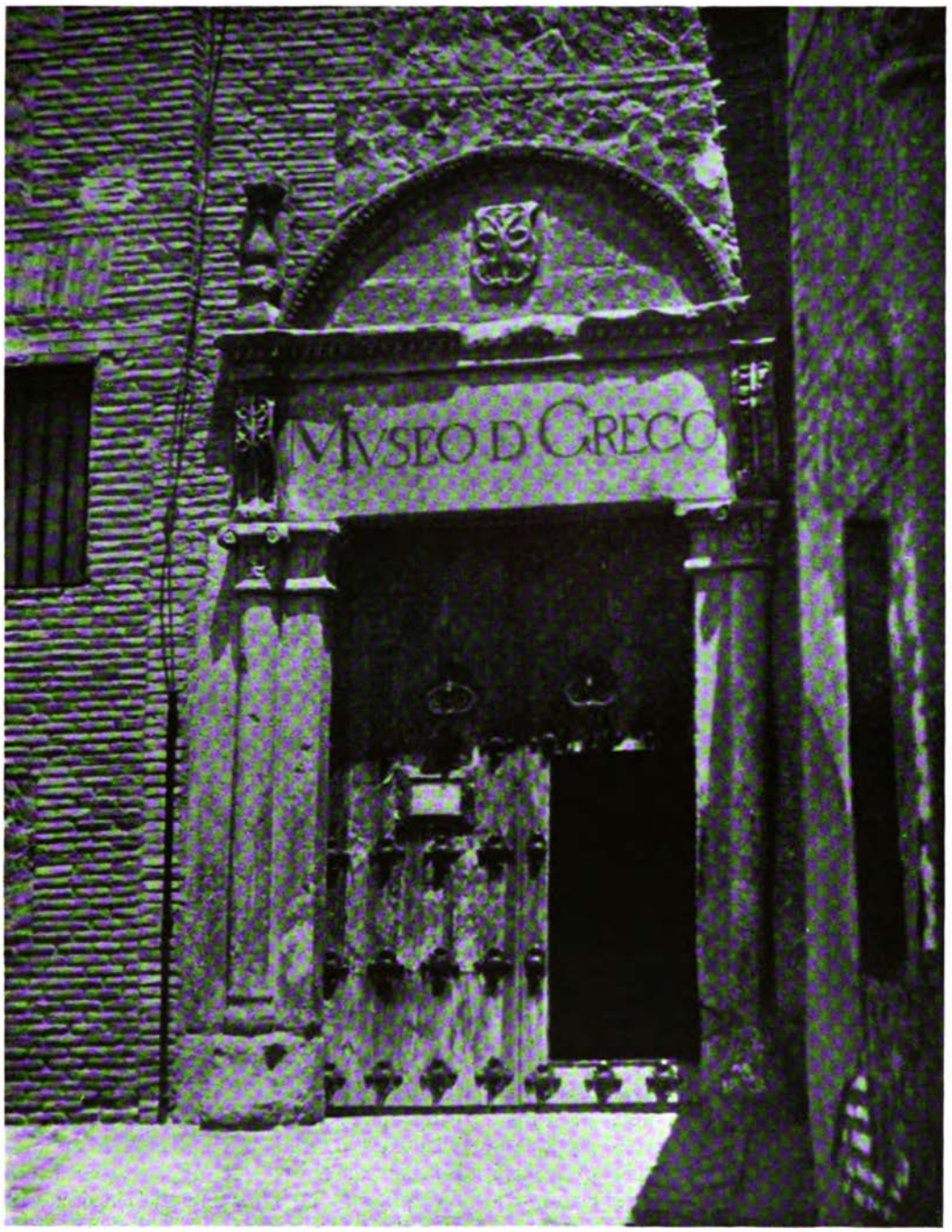
I know few works of masonry more impressive than the fine bridges which span the Tagus at Toledo. The Alcántara is probably the more heroic, but the Puente de San Martin, at the opposite side of the town, is scarcely less impressive. Both date from the thirteenth century and both underwent some restoration in the fourteenth, but in their vigor of conception and simplicity of design, though not in elegance of execution, they challenge comparison with the feats of the Romans. The qualities of flawless perfection, finesse and studied precision of workmanship are not remarkable in the architectural monuments of Spain unless some fragments of the purest Moorish work be excepted. The conditions were hardly favorable to the development of any style to the pitch of finality reached, for example, in Athens or the Isle de France, or even

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TOLEDO—PUENTE DE ALCÁNTARA

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TOLEDO—MUSEO GRECO

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TOLEDO—EASTERN GATE, PUENTE DE ALCÁNTARA

in Rome, and it is probably for this very reason that one feels such a tonic freshness in the wayward vigor, the happy-go-lucky gusto of so much which confronts us. There are, of course, examples of a certain kind of cold pedantry as in the Hospital of San Juan and the Alcazar here in Toledo, and in such a numbing and desolating pile as Philip II's Escorial, but the sombre dullness of these cannot long suppress the excitement of so much which is alive and instinct with the animation of struggle and change.

Of course, the great glory of Toledo is the Cathedral, but we loitered in the streets more than content with minor effects and consciously reserving its orchestral impact as a climax. The façades of the old houses seem mute and inhospitable, screening inexorably the life which goes on behind their bare walls, and within the patios. From the little grilled windows shyly inquisitive eyes look forth, and occasionally through an open doorway we catch a fleeting glimpse of a sun-splashed courtyard. More often, however, the great doors, heavily studded with huge nails or iron bosses and framed with lintels and scarred columns, are tightly shut. These rugged portals, frequently made up of Visigothic fragments, though not enriched with sculpture, have a primitive vigor which compels respect.

Wandering thus aimlessly we came to the little open space called Paseo del Transito on which abuts the Casa del Greco. Whether or not the painter actually lived in this particular house is uncertain, but he is believed to have lived in an appendage of the palace of the Marquis de Villana which stood on this site. The house has been skillfully, if somewhat affectedly, restored. Its plan and interior arrangement is perhaps typical of hundreds of houses of its period. Around three sides of the patio, which is hardly more than twenty-five feet square, are ranged the salon, the dining room, the tiny kitchen, the stairs leading to the upper story and a stable big enough for two or three donkeys. The kitchen, diminutive though it is with its tiled benches on either side of its alcoved chimney, its wrought-iron rack for fire tools and utensils and its burnished pots and pans, is the most interesting if the least accurate part of the restoration. Four stone columns support a wooden gallery running around the patio, which gives access to other rooms on the upper level, filled with historic furniture and some of the painter's distinguished pictures. A semi-transparent curtain or awning stretched from the eaves softens the glare of the noonday sun, but may be drawn back at night when the stars seem to hang almost low enough to touch. Here the strange Cretan gathered about him the leading men of Toledo, poets, philosophers, theologians, for discourse, and here he bade minstrels to

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TOLEDO—CASA DEL GRECO

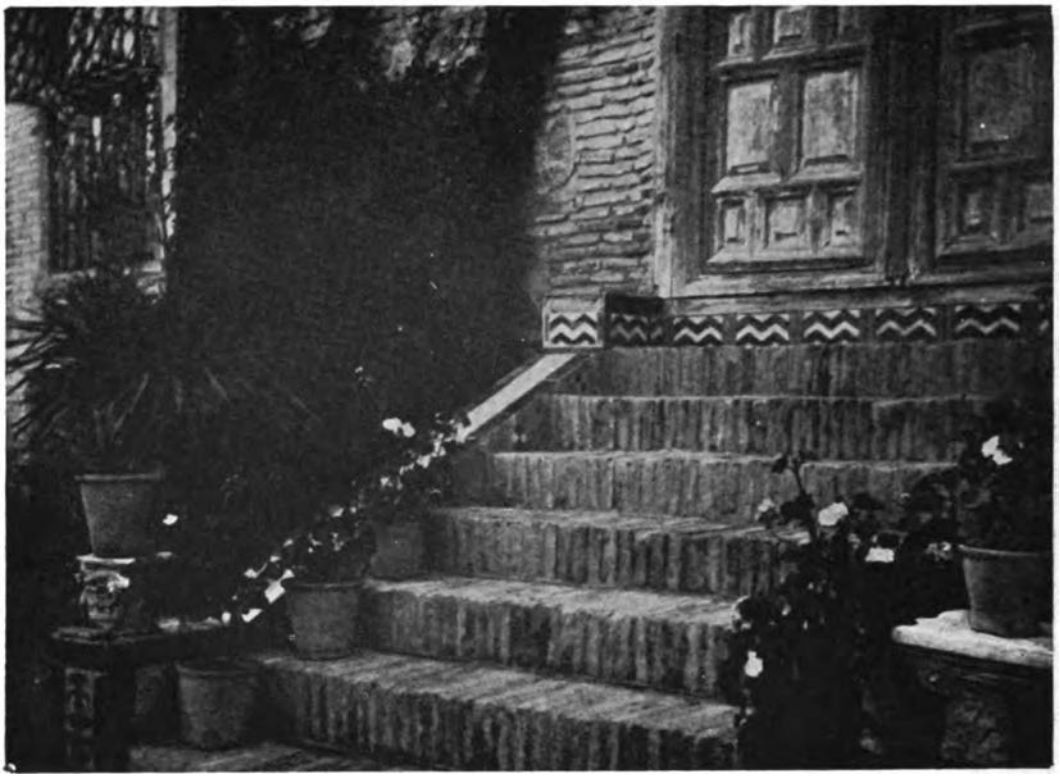
play for him as he dined or as he strove with his brush to evoke the visions which haunted his straining imagination. It was Greco's obsession to savor and divine the strange intermixture of opposing elements in the life about him. With an uncanny mastery of characterization, he has expressed on his canvas not only the features of his contemporaries but he has sensitively revealed the subtle complexity of their souls. How truthful these transcripts are we realize as we thread the streets of his adopted city and look into the grave faces of its young men and girls, its dignified citizens and its austere ecclesiastics.

Adjoining the Casa del Greco stands the small Museum containing other of his pictures including the Twelve Apostles and several fine portraits. His masterpiece, however, or one of them, is the Burial of the Count Orgaz in the Church of Santo Tomé. This Church, originally a mosque, was rebuilt in the fourteenth century at the expense of Count Orgaz. Its fine tower remains but little changed and the Moorish character is as strongly evident in its fenestration and proportions as is that character in the pensive faces of the mourners in the tableau, although these are portraits of the nobles of Toledo in 1584. Their soft eyes and finely cut profiles are Arabic and they seem more like the aristocratic courtiers of Mohammed than the faithful servitors of Christ.

The tolerance of the Catholic conquerors toward the Moor long after the rewinning of the city, and their complaisance toward the Jews over a long period of years, makes their later acts of fanatical cruelty seem all the more lurid. The Arab civilization flourished side by side with the Spanish, places of worship were set apart for the Mozoarabs and the Arab was not finally interdicted until 1580, almost a hundred years after the expulsion of Boabdil from Granada. As for the Jews, though they dwelt in their own quarters, they were allowed to build their synagogues and worship in the faith of their fathers. Employing Arab workmen, they held to the Mudejar tradition in their religious and private architecture. Today, it is said, there are few or no professing Jews in Spain; and their synagogues were destined to echo to the Te Deum and the Latin responses of the Christian ritual. As we stood before Santa Maria la Blanca, its bare white walls gave no hint of the exotic character of its internal detail. Although it is planned with nave and aisles, its horseshoe arches and arabesque spandrels, its interlaced capitals and touches of tile work make it seem more mosque than synagogue and certainly the plateresque altars which were added long after the dispossession of the Jews, which took place in 1405, only confuse but do not Christianize.

Not far from Santa Maria la Blanca is the later

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TOLEDO—CASA DEL GRECO

Synagoga del Transito. It is as purely Moorish but much more in the style of Seville and Granada. Built about 1360 at the expense of Samuel Levy, the money lender and treasurer of Peter the Cruel, its interior is a simple rectangle with lofty walls decorated with delicate arabesque panels showing still some faint traces of color—faded rose, green and blue. A frieze of Hebraic inscriptions runs around the walls above a triforium in some of the arches of which are set pierced *ajimeces* or grated windows. The light sifts through them in powdery beams and transfuses the room with a soft silvery glow. There are no mysterious shadows, no cavernous depths or recesses, no dramatic effects of chiaroscuro, but only a suave serenity unbroken by any climacteric effects. The Synagoga del Transito is like a lavender-scented casket which should evoke only tender memories, but before the high altar where the rabbis once expounded the law are the tombs of the Knights of Calatrava to whose powerful Order the edifice was given by the Catholic kings in 1492, after the tempest of fanaticism in which more than two hundred thousand Jews were massacred or exiled. The rich Jewish treasurer of Pedro had been executed by his royal master more than a century before.

The Catholic kings may have had misgivings and may indeed have found their pious credulity strained by some of the evidence in the famous case of the Niño de la Guardia, the mythical child victim of Jewish malevolence. And to justify the ferocity of their Christian subjects, they caused the walls of San Juan de los Reyes to be strung with chains said to have been struck from the limbs of Christian captives which had been found in Moorish dungeons. San Juan de los Reyes stands at the western side of the town not far from San Martin's bridge, and was built at the order of Ferdinand and Isabella with the understanding that their mortal remains would rest within its walls. Its late Gothic details are very florid and overblown; its pinnacles and crockets too bejewelled and confused. Unlike most examples of Spanish Gothic its richness is the efflorescence of decay; the lines of its arches are not pure and clean. There is a kind of Baroque perversity in the broken and reversed curves of the upper arcade in the cloister. And signs of the coming Renaissance appear in the great frieze of blazons in the transepts.

By long odds the most striking and interesting Renaissance structure in Toledo is the Hospital of Santa Cruz, by Egas, at the opposite side of the town. Enrique de Egas was maestro mayor of the Gothic Cathedral of Toledo in the last years of the fifteenth century, and, at the instance of the great Cardinal Mendoza, who had traveled in Italy, he planned the

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TOLEDO—PUENTE DE SAN MARTIN

Santa Cruz. His design became the prototype of the royal hospitals in Santiago and Granada. The Toledo project hung fire, and Santa Cruz was not begun until 1504, three years after the Hospital Real at Santiago got under way. Egas, by training a Gothicist, adapted the new forms, which itinerant Italian artists and returning travelers described and extolled, with a verve and a freshness which profoundly affected the work of his contemporaries. In its naïve freedom lies the secret of its charm and it bears the same relation to such a dry work as San Juan Bautista as the work of Brunelleschi and Bramante bears to that of Vignola. The richly sculptured portal with baluster framed windows set on either side of it high up, and the curious composition of the colonnade running across at the top make a frontispiece unique and effective in the highest degree. The vast free wall surfaces with their sparse and random fenestration serve as an admirable foil to this richness. It is the beginning of plateresque and there is nothing more charming in this typically Spanish version of the Renaissance than Egas's chiselled windows set in their great expanse of wall. The portal leads through a vestibule into a patio or courtyard surrounded by an arcade in two tiers, the Spanish paraphrase of what Bramante might have done had he been somewhat less sophisticated and somewhat more robust. In the angle next the vestibule a fine stone stairway with carved balustrades, stringers and newels leads to the upper level. The intricately mortised artesonado ceiling is further evidence of the period of transition in which Egas worked.

Days and weeks are needed for a just appreciation of the splendors of the Cathedral. Repeated visits reveal fresh marvels until the sense of opulence becomes overwhelming. No adequate view of the exterior is possible, owing to its hemmed-in situation, and its vast extent can only be realized from within. The nave is interrupted by the Coro as in nearly all Spanish Cathedrals, but its double aisles of unusual width and height sweep around the Capilla Mayor at the eastern end in a majestic semicircle. Between the piers of the outer aisle the walls are indented with numberless chapels built within the external buttresses. But as though there were not enough to satisfy the rising zeal and increasing power of Catholicism, the great octagonal chapels of San Ildefonso, of Santiago, and of the Reyes Nuevos were extended from the ambulatory at the eastern end. To this cluster of appendages was added the Sala Capitular at the southeast angle, and to the north a series of apartments embracing the Ochavo containing the sacred relics, the Sacristia, the Roperia and the Capilla de la Virgen del Sagrario. The Claustro occupies the northwest corner of the stupendous pile. The Cathedral is a city in itself and

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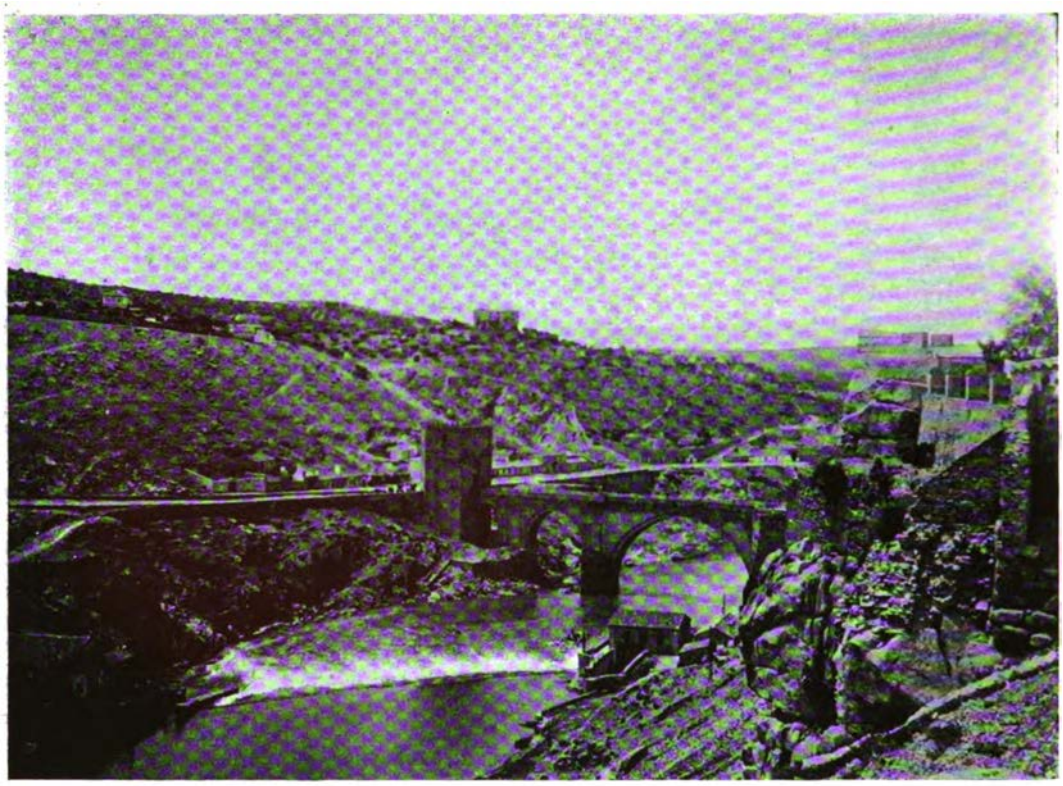
TOLEDO—CHAPEL OF SANTO TOMÉ
The burial of Conte d'Orgaz—Greco

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TOLEDO—OLD PORTAL

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TOLEDO—PUENTE DE SAN MARTIN

the life of the city centers here. Crowds are lost within its vastness; lights burn before its multitude of altars and masses are celebrated in a dozen different chapels simultaneously. The people use it familiarly without constraint. It is their place of rendezvous, of worship, of recreation; it is meeting place, museum and shrine. Generations of architects, painters, sculptors, ironsmiths, goldsmiths and embroiderers have contributed to its glory. The records seem to show and Street seems to hold to the opinion that the foundations laid in 1227 were laid under the direction of a French master mason, but in the succeeding years artists of every nationality flocked to Toledo and their work became fused in the national fervor. Dutchmen helped to pattern the superb windows which glow purple and red and orange and emerald toward the close of the day, filling the vaults with a melody of color richer than the strains of music. Italians and Frenchmen and Spaniards carved and gilded the tombs and retables, fashioned the fabulous vestments of the clergy, the crucifixes and the vessels of Holy office. It is like the cave of Ali Baba. The senses swoon from surfeit and eyes are bewildered by the repeated tours de force of art. Perhaps the crescendo is reached in the retablo of the High Altar by Egas. Here is a monstrous façade of larchwood carved with scenes from the New Testament, painted and gilded with unbelievable richness. Tier upon tier its canopied niches rise up to the very vaulting of the roof. They are crowded with saintly effigies as large as life, groups and single figures in high relief and the whole is painted and covered with a warm patina of gold which glows and coruscates in the mellow light. Before it stands the magnificent custodia and around the walls of the Capilla Mayor are sumptuous niches enshrining the tombs of dead kings and sons of kings, and the sarcophagus of the powerful Cardinal Mendoza, the so-called "Tercer Rey." The Chapel is enclosed on three sides by high walls, carved and sculptured. It is raised three steps above the transept and separated from it by Villalpando's plateresque reja, the reliefs, coats of arms and candelabra pinnacles of which were once silvered and gilded. The grille of the choir opposite was forged by Master Domingo de Cespedes, who beggared his family in its execution. He had agreed to make it for the sum of six thousand ducats. When it was half finished, seeing that this sum was insufficient, he sold his house in Toledo and a farm in the environs, all of his patrimony to finish the work as he had conceived it.

The Coro itself vies with the Capilla Mayor in interest, if indeed it does not surpass it. It is impossible to imagine anything finer than the Silleria of Berruguete and Philip Vigarni. They are carved in

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TOLEDO—CASTILLO DE SAN SERVANDO

walnut wood with great spirit and extend around three sides of the enclosure. Above them runs a sculptured canopy borne by slender columns of jasper, so that the panels are recessed and the priests coming to their offices hold lights that we may not miss any nuance of the artist's skill. The lower stalls are by another hand and their reliefs represent scenes from the Conquest of Granada.

The thick vellum books of holy office with their illuminated initials and stately script lie open on the reading desks and as the last hurrying priest takes his place the chanting of the service begins. Byne met many an old friend among the clergy, for he has measured and drawn, sketched and photographed the rejas, the tombs, the vaultings and carvings, the ceilings of stone and of wood.

A mere catalogue of the treasures of this marvelous place would appall the reader, but mention must be made of several further wonders. The "Espolio" or Disrobing of the Savior by El Greco is scarcely less famous than the Burial of Orgaz, and justifies its position of honor over the altar in the Salon de la Sacristia. Nor is it possible to avoid speaking of the gorgeous Chapter Room or Sala Capitular, another example of the skill of Egas. It is square in plan, roofed by a superb artesonado ceiling panelled and gilded and painted with arabesques. The upper parts of the walls are embellished with frescoes by Juan of Borgonia, and below these, in a wide band, are portraits of the Archbishops of Toledo. It is in every way a rival of the famous Chapter Room in Siena. The Antesala forms a fitting approach to it, but the cupboards of pearwood which line its walls are so exquisitely carved that one might be tempted, by their loveliness, to linger there and proceed no further. I do not know what priceless stuffs lie hidden behind Pardo's foliated panels, but they are fit for the trappings of the Queen of Heaven. One robe of the Holy Virgin which may be seen in the Treasury beggars description, so fine is its material, and so encrusted and beaded it is with precious gems. The pearls, rubies, emeralds and diamonds with which it is sewn would fill a bushel measure and its weight is such that no mortal could support it. Her statues throughout Spain are bedecked with the utmost extravagance, but it is here in Toledo *la rica* that she wears her fairest raiment. "Never," says Gautier, "never did an ancient queen, not even Cleopatra who drank pearls, never did an Empress of the lower Empire, never did a Venetian Courtesan in the time of Titian possess more brilliant jewels, nor a richer wardrobe than Our Lady of Toledo."

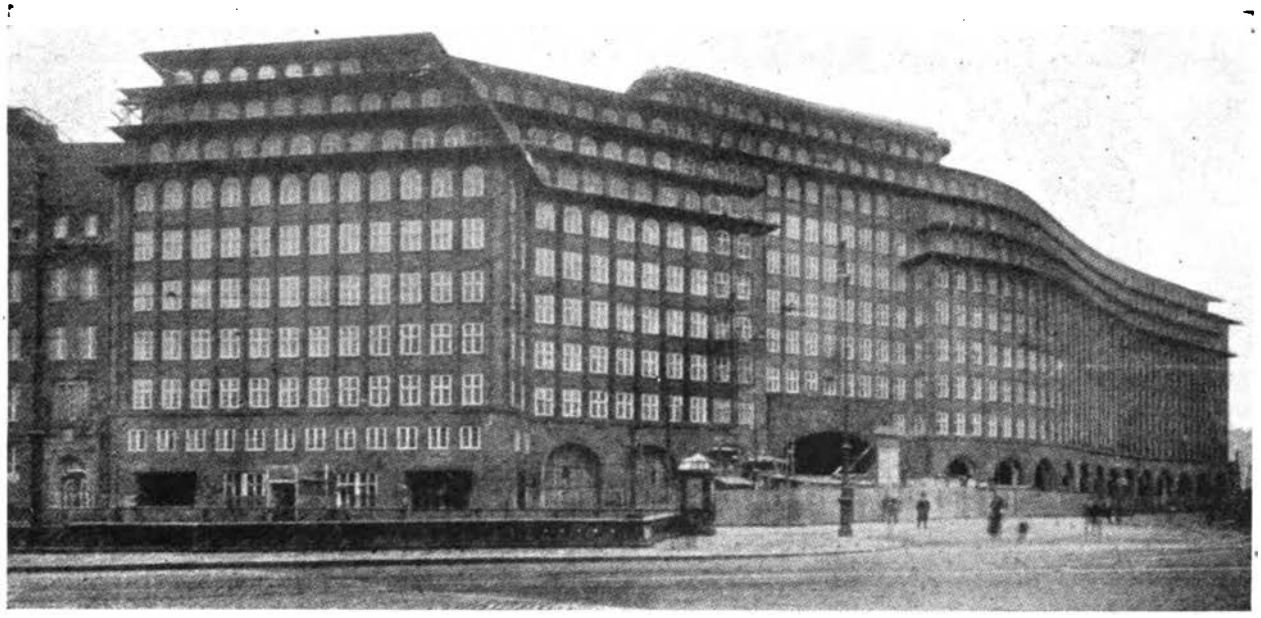
LOUIS LA BEAUME.

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TOLEDO—SANTO TOMÉ

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THE CHILEHAUS—HAMBURG
FRITZ HÖFER, *Architect*

From "Deutsche Bauhütte"

From Foreign Shores

Setting the Canvas

"TEACHER"—mentor—conscience—"may I go out to play?"—"No, child; stay in and perform your tasks. The circus will be here in two weeks; then you may play!" And so I am following the irksome path of present duty in anticipation of a glorious future reward! How virtuous it makes me seem to myself—how altogether religious. Does the presence, or assumed presence, of virtue within one cause him to predicate a lack of virtue in others? I imagine so; else would there be no missionaries; nor critics. Thanks to the little gods I am neither missionary nor critic but, in my present occupation, just perforce the skipper (and how many things it is pleasurable and even profitable to skip), the amused skipper of a very frail paper craft into which I am stowing certain fantastic and certain, after a manner, quite real cargoes preparatory to a voyage on the High Seas. If I were a real critic I could write a paragraph like this, culled from a review by one "H. J." of a new book, in a recent British journal:

"Journalists might conjecture that the author of this book knew more about architecture than writing, and architects might suppose him to be more of a journalist than an architect: the truth being that Mr. D—— is neither. The inaccuracy of his facts disposes of the former supposition, and the presentation of them disposes of the latter."

I am responsible for the D——, which, though it may look profane, is not; I merely, out of the kindness of my heart to a very amateurish author deleted certain letters of a name which the reviewer supplied in full. I will say for "H. J." that he has given a rather shopworn *mot* a well-rounded epigrammatic form; and in order to relate the whole matter more closely to my general feeling on the subject of architectural design I will further say that if modern lifters of old threadbare architectural motifs were to give their wares a corresponding piquancy and freshness of form there would not be in progressive circles quite that same feeling of nausea which is induced by the conventional manner of tying up the present to the past employed by the vast majority of architectural "plagiarists"—shall we call them?—who themselves form so vast a majority of architectural designers; anyway, among the English speaking peoples.

Liberty or Death

We are presented, in London, just now with a particularly interesting example of what I had in mind in writing the preceding paragraph. Illustrations of Messrs. Liberty's new premises, in Argyll Place, W., are appearing in all the London architectural papers and are being copied by the press of the Provinces. The work is being commented upon in the lay press, and a paragraph concerning it has found its way into our own austere *Atlantic Monthly;* a magazine which consistently abjures a discussion of any form of art, or of art in any of its forms, fearing and dreading, seemingly, a departure in any manner from the conventional. It is with mixed feelings that I venture on a discussion of Liberty's; for I am not insensible to the charm of the mediæval and the picturesque, while I am rather intolerant of the transplanted forms of Imperialism in London as in American cities and streets. I like the Grand Manner of Rome in Ancient Rome, but I do not admire it along Regent Street nor in our own

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LIBERTY & CO.'S NEW PREMISES
ARGYLL PLACE, W., LONDON
EDWIN T. & E. STANLEY HALL, *Architects*

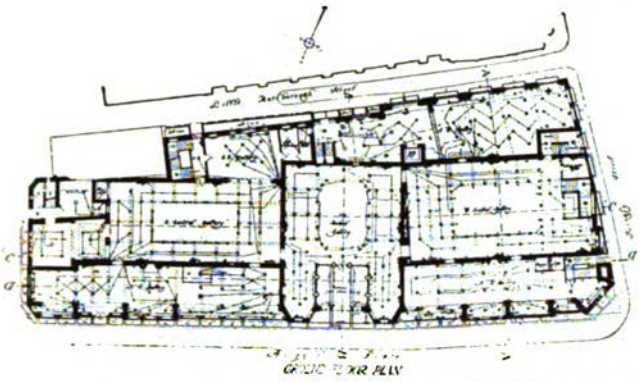
From "The Architects' Journal"

county courthouses and commercial buildings; and for the simple reason that it is not expressive of our life; or if it is it ought not to be, and we need regeneration. That regeneration, however, should lead us to a comprehension of ourselves and not to an adoption of any particular past expression, even though it have in it all the charm of picturesque Tudor England. I cannot see Liberty's in modern London, even on a side street. I cannot see in it an expression of plan or purpose; not even though it is to house a traffic in objects of art. *The Architects' Journal,* London, 4 June, reproduces plans and many general views and details. The plans are most mediæval in character, due entirely, however, to a modern feature, electric lighting, which diagrammed in detail with its runs of conduit, strikes one at first glance as representing a complicated system of vaulting, introduced on the drawings to impress the susceptible professional and the unsophisticated lay elements of a competition jury. Externally, the building is a group of small units unrelated to the big simplicity of the plan; for the plan is big in effect and simple in reality in spite of the divisional fire-walls made necessary by the type of embellishment adopted. Mediæval panelings in wood—carvings—inlays; beaten lead; hand-modeled plaster ornaments; hand-shaped timbers from dismantled and broken up ships; and, as if this were not enough to catch and hold the sentimental, over the doors of the main entrance are emblazoned the arms of King Henry's six wives, who lost their heads upon entering their greater liberty; as the modern merry wives will on entering Liberty's of today. It is not this aspect, however, which caused me to head this topic "liberty or death." (I "lifted" the phrase, you know.) It was the fact that, beautiful and sentimental and charming as this sort of thing may be, if indulged in generally it will spell death to any progress in Art and to any real progress in the arts.

Another Extreme

Liberty's occupies an "island" site of irregular shape permitting a departure from conventional lines which would hardly be appropriate on a more formal or restricted area. In Germany we find a commercial development carried out on an island site of even greater irregularity of outline and in a thoroughly modern and Teutonic manner. Peculiarly enough, on each of these "islands"

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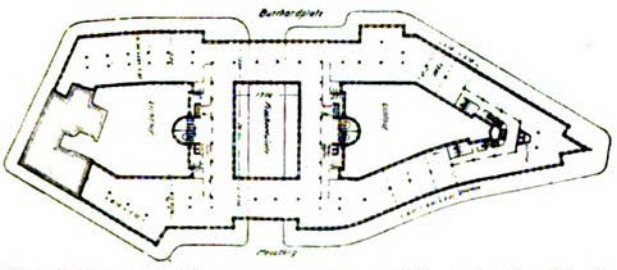


From "The Architects' Journal"

LIBERTY & CO.'S NEW PREMISES
ARGYLL PLACE, W., LONDON
EDWIN T. & E. STANLEY HALL, *Architects*

a corner is cut out by an existing lesser structure which had evidently to be maintained: *Deutsche Bauhütte* gives us the data on "Das Chilehaus in Hamburg," as the structure is named. The exterior treatment is entirely in brick except for the metal gutters of the overhangs. The retreating planes are effectively handled; while the verticals, running continuously from base to the soffit of the thin overhang, proclaim the integrity of the structure, the harmony existing between skeleton and envelope. Of mediæval charm there is none; of modern adaptation of means and materials to ends we have a full demonstration. I indicate in my paragraph caption that I consider Chilehaus and Liberty's at extreme ends of the scale. A little more of reasoned modernity would have been better for London if not for Liberty's, while a touch of sentiment or charm would have been good for Hamburg as well as for Das Chilehaus.

I am interested to behold a more human scale in the design of the German workers' homes. Judging by the examples given in the German architectural press, some of which were shown in my previous article, they are much more genial individually, and more attractively handled in the mass than will be the specimens produced by the British Government Housing Act, if anything at all comes out of that Act. In Germany architects are let into the scheme; in England, despite the high standing of the profession in the popular mind, no architect is permitted to sully with his æsthetic hand a product of the Government's housing system. Surely architecture as an altruistic profession has fallen upon evil days in Great Britain. Mr. Manning Robertson's communication appearing in *The Architects' Journal,* 9 July, embodies some sound sense which if it pervades the British architectural mind may ease the situation.



THE CHILEHAUS—HAMBURG *From "Deutsche Bauhütte"*
FRITZ HÖFER, *Architect*

Registration and Art

Mr. Beresford Pite, known generally and admired, has a communication in this number of this same journal which the make-up man heads "Registration Discord." Something must be wrong with the symphonic structure of Registration when as pure and valid a note as Mr. Pite's causes a discord in its gentle sounding. He seems so thoroughly in accord with my own position that I am going to quote him:

"Sir:—Pious aspiration for unity should in my judgment be rooted in the unifying impulse of art, that subtle bond of sympathy, which is the source of artistic inspiration.

"Registration by examination implies exclusion by the judgment of the few, and, I think, cannot be fairly exercised in the true interests of freedom in the arts of design.



SOLDIERS' MEMORIAL TOWER *From "Construction"*
UNIVERSITY OF TORONTO
SPROATT & ROLPH, *Architects*

". . . The true unification of the architectural profession cannot be achieved by including registrationists and excluding non-registered architects or by pretending that all the latter are either converted or unworthy.

"The R. I. B. A. has its own sphere with its professional members, but if it endeavors to restrict the practice of architecture to its own members it will do a disservice to art. Inquisition and excommunication will have the same relation to freedom in art as in religion."

But one more word as to unity. The R. I. B. A. Council was re-elected on the platform that unity could be effected by the lion and the lamb lying down peacefully together—the lamb inside the lion. I have not

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From "The Architects' Journal"

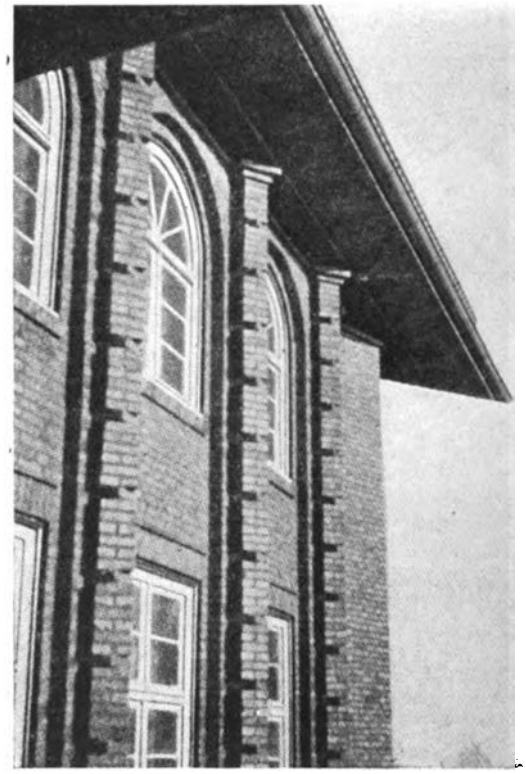
LIBERTY & CO.'S NEW PREMISES
ARGYLL PLACE, W., LONDON
EDWIN T. & E. STANLEY HALL, *Architects*

yet learned whether this idea is entirely acceptable to the lamb, i.e., to the body of the Society of Architects. And now as to art. Mr. Beresford Pite's plea and mine have been in behalf of art. For us, for me at least, the business of architecture hardly exists. I spoke in my last of that far remote peak which arose above the lesser peaks of Institutes and Registration. That is the diaphanous peak of Art which was to be viewed from the vantage points of education and culture; especially the latter. I wish this peak called Art were not so diaphanous—that its crown were not so shrouded in mystery. Even its base is concealed by miasmal fogs which must be penetrated if not dispelled. Art doesn't consist in just doing a thing beautifully—it lies deeper than that. In Robert Louis Stevenson's *Providence and the Guitar,* Stubbs, the banker, as a means of procuring peace in the painter's family, suggests clerking on a salary and pursuing art on the side. "I know a fellow in a bank who makes capital watercolour sketches; he even sold one for seven and six." But Leon Berthelini arose—Berthelini the artist, "'Art is Art,' he repeated sadly. "'It is not watercolour sketches, nor practising on a piano. It is a life to be lived.'" Education and the schools cannot help that phase of it, though a real, deep culture may assist toward a comprehension. Real, deep feeling will go further still.

I opened the covers of the second issue of the *Journal Royal Architectural Institute of Canada* and saw the caption: "The Relationship Between Architecture and Building" and prepared myself for a spiritual feast. But —and although the article was quoted from the *American Architect*—I was doomed to disappointment. Not one word about architecture; not one about buildings; only a talk about architects and builders. That caption contained the kernel of the whole matter and the writer failed to crack the shell. When an artist has dealt with that problem, and it hasn't happened a great multitude of times down through the ages, we have had an art manifestation; we have had architecture. When deep feeling has touched the structure we have had art. But how many examples of that have you seen upon our, or any other, streets, here at home or abroad? The journals which bring my cargoes to me bring many attractive examples of building, portrayals of many fairly satisfactory buildings; but very few which indicate that the author is more than technically proficient, though highly technically proficient, in "the use of compasses and rulers," to quote from the book reviewed by "H. J." and referred to in my opening paragraph. I am going a little deeper into this matter at another time, and at other times, but I must leave myself space for less important things just now.

Expositions and Such

I should like to devote some space to the buildings of the British Empire Exposition at Wembley. I believe the Britishers call it Exhibition; but while one is devoting as little space to it as I am, why not use the high-sounding word? John Simpson and Maxwell Ayrton, P.P. and F.R.I.B.A., appear to have done a good piece of work both in the general plan and in the design of the main buildings. *The Architect,* London, which has just reappeared on my table after more than a year's absence, and *The Architects' Journal* devote considerable space in



THE CHILEHAUS—HAMBURG *From "Deutsche Bauhütte"*
FRITZ HÖFER, *Architect*

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text and illustration to the Exhibition; as also they do to Liverpool Cathedral, a new portion of which has just been consecrated. A correspondent from London poached on my preserves and gave much of the Cathedral in the August issue of this JOURNAL. I hope we may soon be able to see a drawing of the new and heightened tower in its relation to the entire composition. It seems an improvement to me. I am interested in this structure, having climbed over it, or what there was of it, some thirteen years ago.

And I am interested in Sproatt and Rolph's Soldiers' Memorial Tower at the University of Toronto from *Construction,* Toronto, as I saw the plans in the making when I represented the Institute at a convention of Canadian architects in that city. While on the subject of Conventions or Conferences, I would be highly pleased to have been present at the R. I. B. A. Conference in Oxford and to have enjoyed that session at that place with my British architectural friends. I should like to see Oxford again, the real thing which grew out of the life, having seen the spiritless imitations which have appeared upon so many of our own college campuses.

Via the Latin Countries

L'Architecture, 10 June, is devoted to examples of work exhibited at the Spring Salon. The archæological section seems the best. In the issue for 25 June we find illustrations of a shop[1] in the avenue de l'Opéra. The shop, or *boutique,* seems well stocked with implements of the chase. Powder, powder puffs, rouge and lipsticks seem to be exposed for sale. Diana and the Harpies can be well supplied here. I should be chagrined were this to turn out to be simply an apothecary's shop instead of a lovers' arsenal! Note how the ceiling has been shot up. Mexico, Spain and the Argentine come laden with offerings. *Arquitectura Espanola,* the offering from Madrid, presents a series of unbound plates and is published avowedly to promote and further Spanish Architectural Art throughout Great Britain, America and Spain. All text is in parallel columns of Spanish and English. The publishers are canny. In the Spanish column the countries are named in this order: Spain, Great Britain and America. In Spain put the Frenchman up the chimney.

Long and appreciative obituary notices of Goodhue, Bacon, Pierce Anderson, and Sullivan appear in the British architectural press. The *Architects' Journal* for 18 June devotes considerable space to Sullivan both in the matter of text and of illustrations. Good portraits of the men appear and genuine sorrow is expressed touching the loss which architecture in this country and hence in the world has sustained. Certain it is that a loss has been created here which time will be long in filling.

IRVING K. POND.

Paris Letter

IN PARIS, perhaps more so than in any other European city, the life of the street plays a preponderant part in the life of the metropolis. And so, as soon as a new factor commences to disturb the customary air of the place, one is tempted to combat this discordant note (at least, it seems discordant), which so alters the quondam harmony of the streets. Signboards provoke the critics most frequently; the tramway trolley-wires have their set of adversaries; while still others are up in arms against those shops painted in very lively hues—from all quarters come demands for the strictest regulation.

Yet these questions should be examined with calm and impartiality, for these innovations, often crude and maladroit, are the forerunners of new customs, of new needs to which a new art will respond. This is evolution, as much a milepost in the life of cities as of individuals, and it is quite possible that the charm of Paris comes from that which is being constantly evolved without restraint, or at least without stupid opposition. That is why the City of Paris, instead of damming up this stream of creative effort, seeks to render its course smoother and to interest her citizens in the purity of its waters.

As to the billboards, nothing has yet been done, but competitions have been held annually, and prizes are awarded for the street-fronts of new mercantile establishments. The artist who creates the winning design receives a medal, and the merchant is compensated by certain tax exemptions. It gives the men, in addition, some interesting publicity, for the results of the competition are reproduced in all the large daily journals. These competitions arouse a most effective rivalry, and one may remark—in the past ten years—a tremendous advance.

The officials of these competitions also give the Jury an opportunity to influence the artistic education of the public, and to make it feel, by means of striking examples, that a piece of work is not good merely in itself, but that it is more valuable when it harmonizes with the street or the ensemble of which it is a part. Thus an award has been made to a merchant on the rue Royal, who was content to re-establish and follow the style of architecture employed in that street since its inception. It is worthy of note that his shop draws attention (the natural desire of its owner) fully as well as neighboring façades which have broken away from the traditional scheme of the street instead of dovetailing into its forms.

A perfumer's shop, conceived in the most modern spirit, was ranked first in this year's awards. Without exaggeration, it is a delicate piece of work, and it is not the first accomplishment of its architect, M. Marrast. In these pages we reproduce two photographs, an exterior and an interior, of a store previously designed by him, in the avenue de l'Opéra, for the purveying of food products. The street façade is composed entirely of materials which lend themselves to a harmonious treatment. The lower part, up to the height of an average man, is clothed in brown marble and veined garnet; the upper portion, as well as the roof structure, which stands out boldly along the whole breadth of the building, is in a lustrous sandstone of an intense blue, relieved by occasional touches of gold, as for example in the bunches of grapes which may be plainly seen in the illustration.

[1] Illustrated in the "Paris Letter."

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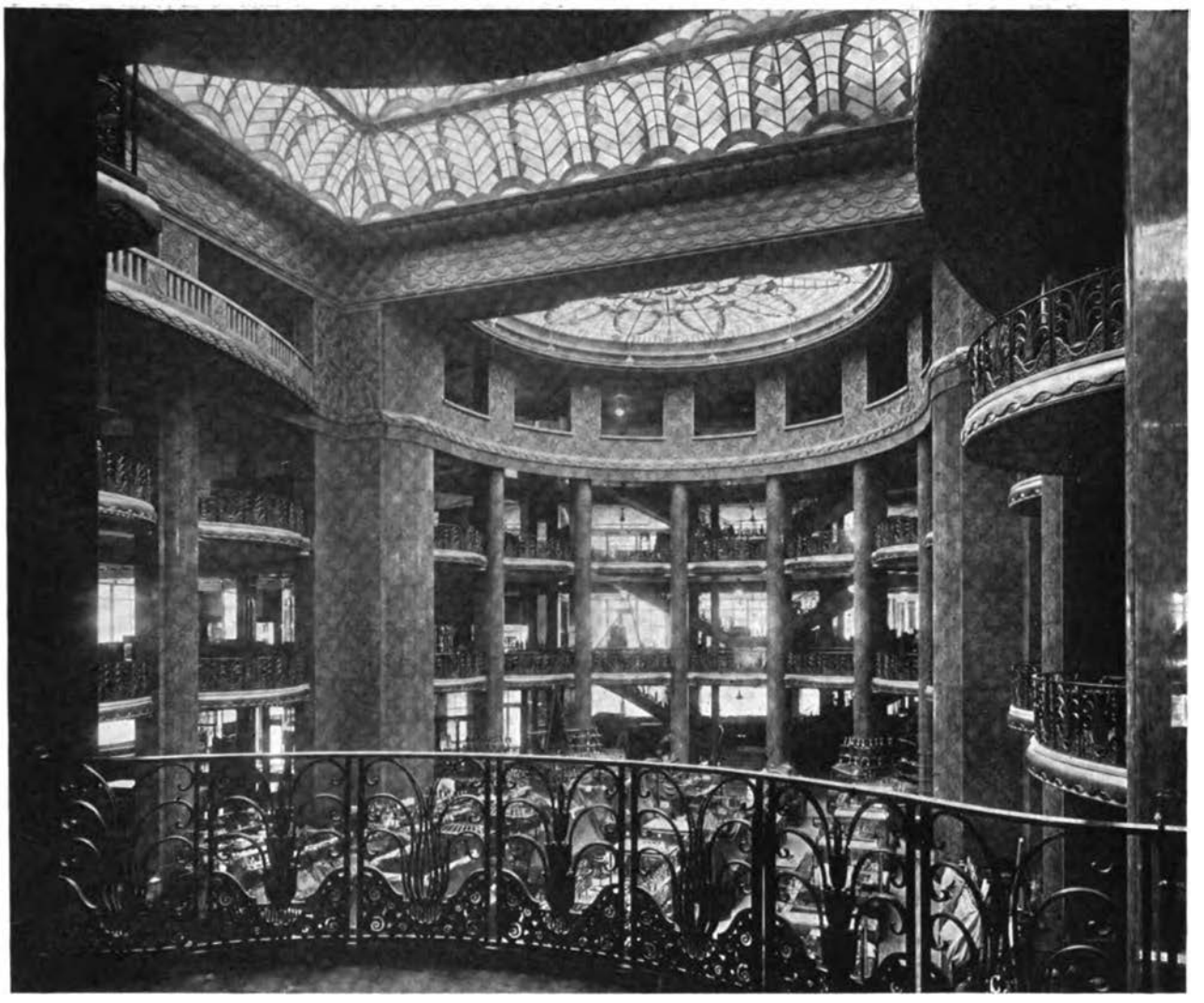


A Perfumer's Shop—Avenue de l'Oépra—Paris
M. Marrast, *Architect*



A Perfumer's Shop—Avenue de l'Opéra—Paris
M. Marrast, *Architect*

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AU BON MARCHÉ—PARIS—THE NEW ANNEX
L. H. BOILEAU, *Architect*

The interior of the shop is no less happily conceived. We reproduce a view of the little hexagonal hall which forms the rear of the establishment. Above the cashier's desk, seen in the centre background, the architect has framed the picture which served as signboard in the original shop. Collaborating with M. Marrast on the decorations on the sandstone and the fresco painting was M. Marret.

Nothing so far has been said of the plans of these shops. They necessarily vary with the kind of business for which they are intended. But a definite tendency is apparent, especially among the dressmakers' establishments, to create a sort of arcade, fitted out with show windows, mostly opening upon the street. Into this passageway people naturally enter, in general without any actual intention of making a purchase. But once inside this artistic trap, the temptation becomes so strong, and the store itself is brought so temptingly near, that the mere passerby often becomes a customer. There is occasionally hesitation among shoppers about entering a closed-in shop with which they are not familiar; the least obstacle will halt such people. It is therefore necessary, from the proprietary point of view, to eliminate these defects as far as possible.

Among the designers of the prominent Parisian shops are several architects known for their work in town-planning. It is only natural, of course, that they should pay particular attention to the harmony which should be maintained between the smallest elements of a city and its ensemble.

The architect Redon, who was a witty psychologist, maliciously taught his pupils that what had made the fortunes of the great establishment of Au Bon Marché was that the interior court was at street-level, and that visitors had not a single step to ascend to gain the great hall.

We can now discuss certain new parts of this store, for an annex has just been completed, entirely with the plans and under the direction of L. H. Boileau. In Au Bon

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AU BON MARCHÉ—PARIS
THE NEW ANNEX
L. H. BOILEAU, *Architect*



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L. H. BOILEAU, *Architect*



AU BON MARCHÉ—PARIS
THE NEW ANNEX
L. H. BOILEAU, *Architect*

Marché, we are not concerned with a simple shop, but a veritable mercantile monument. The impression upon the observer is of a magnificent simplicity with, at the same time, a feeling of great luxury. But there is nothing flamboyant or gaudy. The *points d'appui* are treated with extreme sobriety; they are covered with smooth stucco, like the lintels which they support, without other ornamentation, without bases, without capitals. All the decoration—gold or gray—is found in the friezes, the balustrades and the ceilings. The stairway leading to the retail department is in complete accord with the whole interior; nothing is too minute; all is large, ample, and very legible. Particularly appropriate solutions of architectural problems are revealed in the glazed ceilings and marquises, where the architect has employed engraved glass which yields a very soft and yet quite intense light.

An especial feature of these halls is their excellent lighting. Daylight penetrates directly to almost all the display of wares, contrary to the usual state of affairs in such establishments; nevertheless, there is an intensified artificial lighting system for the dark months. The distribution of the lamps has been carefully studied, and even in broad daylight their arrangement forms a part of the decorative scheme.

The façade is in complete harmony with the interior. It expresses the same whimsy, the same simplicity and the same monumental spirit.

What the illustrations do not show is the striking—and studied—contrast between this calm, sober and dignified architecture and the incessant movement of men and especially women, bestirring themselves about counters

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laden with delicately-made and tinted objects, of brilliant and costly fabrics. Such a contrast must be considered in judging a work so personal and intimate as this.

If architecture has already found the opportunity to manifest its tendencies within the old city limits of Paris, we can now hope that these limits will be altered and expanded in a rational manner. For, on 22 July, was passed a law supplementing the existing ones relating to the disposition of towns, the first of which group dates from 1919.

This law provided that all the large communities should prepare a plan for extension, arrangement and embellishment. Unfortunately the indifference of the individual organisms, and the opposition of special private interests, had not been foreseen, and, after three years of application, it had to be admitted that the law was ineffective. The new law provides the municipalities with no trifling powers.

It will be interesting to recount the principal features of this law. First of all, the law applies not only to cities of a certain magnitude, but even to the resort and holiday towns, and to those designated by the commissions of historic sites and monuments. As soon as plans have been approved, the municipalities will be allowed fifteen years to lay out and build the new streets, even to the point of acquiring land upon which vested interests had proposed to erect buildings. As to territories situated outside the present city proper, this period is extended to thirty years. Finally, very severe restrictions are leveled at speculators, who up to the present time have been able to buy large tracts of land and sell them off in small plots, without even creating the necessary sewers, laying out streets or providing them with water.

This state of chaos will now be brought to a halt, for cancellation of sales can be obtained by the authorities if the sellers do not consent to submit to the conditions designed to secure the highest possible level of public sanitation. This law has been awaited with impatience by all town-planners, who now hope that their research efforts and propaganda is at last to achieve practical results. As far as Paris is involved in this question, there can be no doubt that all artists will join forces with the town-planners and the hygienists to ameliorate living conditions in the city, at the same time safeguarding all the beauties of the past and permitting new creative work to flourish.

G. F. Sebille.

Five Architects and One Truth

IN THE profession of architecture, either in the United States or elsewhere, there are not many brightly shining marks. That is to say, outside the ranks of those who plan and design buildings, one would be hard put to find a citizen in any land who could name half a dozen modern buildings of distinction. If he did know such a group and also knew the names of the architects who designed them, the find would easily pass as miraculous. Yet within a period of ten weeks, Death swooped down and gathered in three American architects, whose names are known pretty well around the world, among their fellows. All of them have left achievements, and the work of two of them has affected and still is affecting the architecture of lands and peoples far removed from the Western hemisphere.

The first to go was Henry Bacon. Then there followed Louis Henri Sullivan. Last there went Bertram Grosvenor Goodhue. By their deaths in so short a space they outstand as a trio. Not only that their works and their philosophies invite reflection and comparison, but that within the brief period of their lives there was being written in their land a chapter in the history of architecture the like of which has never before been known. In what form that chapter finally shall appear is for Time to determine, but into the writing of it Bacon, Sullivan and Goodhue played large parts and played them well.

Bacon is best known as the designer of the Lincoln Memorial at Washington, a building which is also the perfect expression of what he believed to be architecturally best. He worshipped at the shrine of the Grecian tradition with a fervent and even passionate sincerity. He loved it, lived it, steeped himself in it, and into the building of the Lincoln Memorial he poured a lifetime of study and research. He knew, as everyone knew, that the Grecian architects had, by the slow process of trial and error, arrived at what they saw to be perfection. So they called it and so they left it. For them there was nothing further to be done in the temple form. Exquisite exactitude had been attained. Members and moduli had been established on a rhythmic base of mathematical accuracy. The horizontal spacing of columns was determined by the height of the shafts, but the height of the shafts was likewise determined by the spacing, since neither could exceed the proportion established by the lintel. A Greek temple could go no higher than the proportion of all parts fixed by the lintel that could be quarried and lifted into place. All had to give way to the inflexible rule of the just proportion, and the perfection of it has never been challenged. Even to the minutest detail, the inflexible rule applied, but behind all this seeking was no mere effort to arrive at a lazy rule-of-thumb method for the mass-production of perfect architecture. Behind it was absolute faith,—faith in the Universal Law of Number! A faith over which the controversy still faintly flickers and flames, now and then, but which staidly, silently and confidently, leaves the answer to the great cosmic flow of rhythm.

Here, in Greece, we may be certain, were no passionate pilgrims seeking to be original. Here were no vested professional interests pretending to produce art, as they called it, the while they messed up their com-

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munities with the stuff and nonsense that gapes from the street facades of any city in the New World. The Grecian architect sought perfection of form in a type of public building.

"The rivalry between Pythios and Hermogenes, who lived about a century apart, was a contest to discover the same thing—the most just proportions for a series of architectural parts of established shape in predetermined sequence of arrangement, in fact, the perfect norm for the century-old Ionic order as applied to the century-old plan of the peripteral temple. And these were great architects, the greatest perhaps among the Greeks of their age, not because they had done something new, but because they had done something very old a little better than anyone else had ever managed to do it. The Athena temple at Priene and the Artemis temple at Magnesia were claimants for one and the same title, that of the Ionic order *par excellence;* their size, their use, their location, their cost, were all minor considerations to this great distinction of being canonic, the perfection of their tribe and kind. In comparison with the differences which are apparent in any two Gothic cathedrals built within the same century A. D., these two Ionic temples would be undistinguishable one from the other. In this Ionic architecture of the Asia Minor coast we can obtain a very admirable notion of the extent to which individual preference and invention were encouraged or allowed to assert themselves."

Professor Carpenter, in the delightful little book from which I have just quoted, also takes up the parallel of the perfection of the Doric order, which was that chosen by Bacon for the Lincoln Memorial. Whether the Doric temple form was permissible in building a memorial to Abraham Lincoln, or whether there was demanded something fresh, original, wrought out of the fibre and sinew of the man himself and of his life and time, was a question that evoked a great and at times a bitter controversy. But Bacon's faith was so honest, so simple, so straightforward, that no one could challenge his sincerity. It was strongly supported by the fact that the classical tradition had already been established for the public buildings of Washington,—a tradition laid down and still stoutly adhered to by the Commission of Fine Arts,—and now the Lincoln Memorial stands by the Potomac, and the honors have been heaped high on the architect who sponsored it. Yet it is certain that Henry Bacon would have been the very first to share his joy with the masters who inspired his *parti,* nourished his faith, and encouraged his unceasing study of that form in architecture which he accepted as pure and thereby perfect.

Louis Henri Sullivan stood as the utter denial of all of these things. He would have yielded to no one in his admiration of the purity and the beauty of the Greek architectural form as related to the time and the life of those who had evolved it. But to him the use of this form, and worse still, of the members that composed it,—as for instance, when architects borrowed columns for decorative purposes where no structural factor needed their service,—was not only the most barefaced thievery and deceit, but a confession that architecture had come to an end long ago. His philosophy went even further. It went to the uttermost limit, denying the past completely, except as a source of inspiration, a whip and spur to put the modern architect on his mettle, that he, too, might arrive at a perfection of form born out of the needs and the life of his own time. "Form follows function," was the pith of his message, and in the draughting-rooms of many an academic office, where archæological wares were being dished up out of books and palmed off as art and architecture, his words fell like rain upon a parched earth. The message came out of the blue like a flash of light. Architecture was not a dead art, but a living one! The proprietors of the vested interests in styles, of which architectural practice is as full as is any form of capitalized property, took umbrage and alarm. But this is one of the little worms in the bud of art that is too often overlooked. The connection between the pocket and a profession of æsthetic philosophy is lost to sight, or deftly concealed, and thus a natural and perfectly understandable proprietary interest is allowed to masquerade as holy emotion.

But many of the youth of Louis Sullivan's day were, it seems, secretly rebellious. At least they were so in the middle and far West, where they answered, when taunted, that "traditions, established order in art, and beauty by dictum" had not lichened and mossed their minds into deferential docility. They believed in Louis Sullivan. No such message, they said, ever had come out of the humdrum environment in which men, all over the country, plodded away at their studies in styles and orders. To build a building they began by choosing a style, and then the owner got what he could out of it. If he lacked light, it was because the style demanded a fenestration which permitted but little light. If half of a library building had to be given over to a grand stairway, it was because the style demanded a grand stairway. Hardly more than a generation ago, such was the manner of producing architecture in America. It still prevails to some considerable degree.

To say that Louis Sullivan became the most powerful influence in American architecture would be vociferously challenged in many quarters. To utter the prediction that some day his philosophy will be recognized as the basis of all worth-while architecture in America, is not taking an inordinate risk. At heart he was at one with Pythios and Hermogenes. His philosophy had been evolved in one of the most remarkable educational experiences that ever befell a youth, and which he has himself told in *"The Autobiography of an Idea."* The influences that shaped this amazing mind stand as a complete refutation of all our modern theories of what we call education. Humbug and hypocrisy, out of which he saw architectural sham emerge, were his detestation and his horror. Stop! Halt! Wait! he cried out to the youth of his trade and day, and many listened and heard, and some wept

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and were heart-broken when the news of his death came to their still revering ears.

Today, in Northern Europe, where one may find the only old-world evidences of any modern architectural achievement,—in Norway and Sweden, Holland and Denmark, and remoter Finland, the name of Louis Sullivan stands high. Some primal directness of mind seems here to linger amid the wilderness of academicism and pedantry that flourishes pretty much over the rest of the Western world, and the lovers of architecture who long for something fresh, even as the tired business man sometimes longs for an old meadow with an elm tree and a brook, will thither turn their steps. There they will hear men speak well, and even in a praise so high as almost to be worship, of the Louis Sullivan that once proclaimed that architecture was a living art.

In the United States but few of his works remain. The Auditorium Hotel, in Chicago, is bound, so they say, for the scrap-heap, and with the present onrush of urban growth, another decade may have obliterated every trace of a building by Louis Sullivan. But it was this very onrush which blasted his hope, challenged his philosophy, denied his architectural conception. For in the boom of America, a new set of factors had arisen. They were as unperceived, at the time of Sullivan's resounding message, as the rate and direction of flow of what people called Democracy were guessed by even the least misguided of its hymners and chanters. These new factors were pecuniary in their nature. They had little or nothing to do with the technique of building. Form, in following function, even under the determined will and the mighty resources of Sullivan, soon had to reckon with them. In great architecture,—even in good architecture,—pecuniary factors and technical factors coincide. They flow along together, since what is rightly done is done at the least expense, in the end. But these two factors began widely to diverge under the impetus of the wild and disordered development of the natural resources of the United States, and with the advent of steel construction, which coincided with Sullivan's entrance into the practice of architecture, they were soon as far apart as the poles, and farther apart they are still going.

Under the necessity of finding some way of capitalizing the rising value of building sites in cities, as larger and larger crowds of people began to flow by these sites, buildings had to be pushed up. So long as their walls had to carry the floor loads, the height was limited. One finally reached a point in trying to design a high masonry building, at which the thickness of wall demanded in order to support itself and carry the floors left no space inside. The steel skeleton changed this like magic. Heights became almost limitless, and the era of the skyscraper came in like a blight. To Louis Sullivan it spelled opportunity. Form and function were to be married anew, and out of this new union there must and should emerge an array of architectural progeny in such abundance, and such beauty, that none could ever again deny his creed,—"Architecture is an ever-living art!"

But the pecuniary factors soon dominated. The primary function of the great bulk of urban building became that of earning a return on the investment, either in the shape of a quick sale at a profit, or in rentals. It was all a kind of madness. The use of credit for speculation in building ran into complete anarchy. Louis Sullivan's dream of an ordered community, where the height of building scaled with width of street, and where men still saw the sun by day, and could even remember that there were stars at night, or a moon, drifted into the jungle of the subway, the traffic cop, and the electric light. Architecture, as the beneficent art, had no chance in this struggle, for architecture has to begin with a plan, and for the development of the United States there was never anything even faintly resembling a plan. There was only a scramble, and architects, even if they were the greatest of artists, cannot make architecture grow in the scrambled soil of financial anarchy. (This is in nowise intended to deny the achievements of American architecture, *per se,* but it is intended to point out the small proportion of good architecture to be seen, when one views the whole field of building, and to emphasize the truth that very little has been achieved in harmonious co-ordination and social relation or in offering any resistance to the creeping paralysis that is afflicting our arteries of traffic flow, as heights rise and volume of occupancy increases along those arteries.)

Slowly, tragically, and yet serenely, Louis Sullivan slipped out of the welter that could not ride over him. One of the great voices of any age ceased its protest. The spectacle of the reformers working up their evangelical ecstacies, offering their "Educational Embrocations," "Political Pills," or "Social Salves," was merely nauseating to a man who had uttered a truth. Architecture was, after all, but one of the parts of a greater whole, and the task of man had to be directed toward that whole. I quote from his *Autobiography:*

"The fabricating of a virile, a proud and kindly civilization, rich in its faith in man, is surely to constitute the absorbing interest of the coming generations. . . . The chief business now is to pave the way for the child, that it may grow wholesome, proud and stalwart in its native powers. So doing, we shall uncover to our view the amazing world of instinct in the child, whence arises genius with its swift grasp of the real. The great creative art of upbuilding a chosen and stable civilization with its unique culture, implies orderly concentration of man's powers towards this sole end, consciously applied in each of his socially constructive activities in the clear light of his understanding that the actualities of good and evil are resident in man's choice—and not elsewhere. Thus will arise a new Morale in its might!

"And let it be well understood that such creative energy cannot arise from a welter of pallid abstractions as a soil, nor can it thrive within the tyranny of any cut and

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dried system of economics or politics. It must and will arise out of the heart, to be nurtured in common honesty by the intelligence, and by that sense of artistry which does not interfere with the growth of a living thing, but encourages it to seek and find its own befitting form. Thus the living idea of man, the free spirit, shall find its form-image in a civilization which shall set forth the highest craftsmanship, the artistry of living joyously in stable equilibrium."

Has any man ever offered human beings a message more moving than that,—"the artistry of living joyously in stable equilibrium"? How immeasurably it transcends the petty prattle of those who peddle their little nostrums in parrot-like refrain!

Bertram Grosvenor Goodhue died at the moment when his powers had begun to ripen into a noble maturity. His death leaves American architecture poor indeed, for while the number of his executed works is considerable, and their influence already a dominant one over those of the present-day youth who have escaped the blight of academicism even as was Louis Sullivan's influence dominant to the youth of a generation ago, the promise of his unexecuted work was far greater. The genius of Goodhue grew slowly, but with the barest exception, every work of his was a step forward. Like Sullivan, he possessed an exquisite feeling for line. Both were draughtsmen *hors concours*. But while Sullivan applied his marvelous hand to the demonstration of a giant conception of architecture, Goodhue drove directly at a mastery of detail. Perhaps it was by sheer force of circumstance, or perhaps it was because he was a mediævalist at heart, that he became for a period one of the foremost gothicists of his day. Some acclaim him as the greatest of all, but Goodhue knew that he still had much to learn from other masters. So far as gothic is concerned, he, himself, has said, that he would have been happy to have designed so beautiful a gothic building as Sir Gilbert Scott's cathedral at Liverpool, and the influence of that building upon much of his work is too pronounced to be missed.

Sullivan's philosophy was essentially an intellectual thing, if one may so state it, as compared with that of Goodhue, for his could have been stated only in the terms of creative instinct and craftsmanship working upon materials. Both abominated sham. Both were artists endowed with astonishing faculties for creating. Either might have reached the top in any field of art he chose to essay. Neither of them had suffered the educational process to put the blight on their minds or clip their wings. But while Sullivan hitched his wagon to a star and took the consequences, Goodhue set his gaze on the same star and never lost it to sight. Much he was spared by the slower ripening of his genius. Much Sullivan suffered because his own burst into full flower at an inopportune moment. The very didacticism of Sullivan's dictum took the edge off for Goodhue, for while he was traveling the identical road that Sullivan had indicated, he wished to be free from any word-form that sounded like a limitation.

He was one with the craftsmen, or more properly with the artisan that was once an artist. Things had to be felt out and come at straightforwardly. There could be no architectural trickeries and pretenses. Buildings must be what they said they were. So said Sullivan, too, but he had wrapped his thought in words, whereas Goodhue would have embraced it joyfully had it been set forth symbolically in building after building. Perhaps that is the manner in which their differences may best be expressed, for even though Sullivan has left almost no architectural attainments behind, and although Goodhue has left, in my opinion, a host such as no other living architect can point to, there is something curiously intriguing in their lives. Sullivan proclaimed a truth, and under its flag he challenged the whole existing economic system, nothing less, as he later came to see.

"Of man's betrayal by man on a colossal scale he knew nothing and suspected nothing. . . . He believed that most people were honest and intelligent. How could he suspect the eminent?" I quote again from the *Autobiography*.

Goodhue lived his truth, from building to building, and happily, or not, he was hardly ever faced with problems essentially commercial in their nature. And yet he, too, was preparing his own challenge, just as surely as Sullivan had launched his. This is evident if one traces the periods of Goodhue's growth. They are so marked that they cannot be missed. Each emancipating influence is clearly discernible, and seldom, we may well believe, was Goodhue unaware of their appearance. In gothic he had gone to the top, when he went to Persia. He came back with a whole new alphabet of forms,—or, to put it as he would more likely have done, with a new bagful of symbolic substance. That was the beginning of the end of Goodhue as a worker formally in the gothic mode. Mexico came next and another strong influence asserted itself. Then the Oriental and the Spanish merged and a new era began.

Little by little all the old mastery of detailed ornament began to be transformed. Little by little he began to throw away ornament. One by one ribs and mouldings disappeared. Then it was that Goodhue began to realize his really fundamental philosophy. Then he began to play grandly with structure in the mass. He had come into his own not by a wholesale cleaning out of the architectural garret,—not by a sweeping rejection of the whole clutter and litter that had so long been offered as art, but by an orderly process of discriminating evaluation. True, in the end, he had cleared out the garret about as thoroughly as Sullivan did, but in the patience of the process he had likewise been able to test his powers. Men were afraid of Sullivan's empty garret and of the new stuff he was to put in it.

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Men were also afraid of Goodhue's process as well, for there were many vested interests stowed away in the architectural garret. The owners thought them inviolable in their dusty and cobwebbed security, and saw them thrown out with many a misgiving. But the commissions flowed in to Goodhue with an ever-increasing confidence, and over a period of two decades there came from his draughting-board a succession of creations, each one singing a lovelier song, or if not lovelier, then with a new and haunting cadenza.

In architectural circles his name began to be heard pretty often as the new Military Academy at West Point began to take shape. He was then a partner of the firm of Cram, Goodhue & Ferguson, as he was when the jury handed that firm the prize for designing St. Thomas's Church on Fifth Avenue. Then there came the first drawings, by himself, for the Baltimore Cathedral. Here was Goodhue playing with the gothic style, a good deal in the theatrical manner, with little romanticisms and dramatic trifles. In the Church of the Intercession, at New York, he began to see large scale detail and to let the brilliance of his draughtsmanship give way to the glory of sheer structure. In the Church of St. Vincent, also at New York, the influence of his visit to Scott's cathedral at Liverpool is clearly discernible, and it was then that the Baltimore Cathedral was completely redesigned. Something deep, something very fundamental, had occurred and pure draughtsmanship had been challenged by a clarion call. Then came the Chapel of the University of Chicago, and that, strictly speaking, was the end of the gothicist, although a host of smaller structures, many of which would have crowned an ordinary career, were designed during this time.

After the visit to Persia Goodhue did the house and gardens for Mr. Gillespie at Montecito, California, and the new beauty of these announced the new length of stride. In the Washington Hotel at Colon (Cram, Goodhue & Ferguson), mass begins to assume dominance. The concentration of ornament makes for large spaces and here also begins the use of colored tile. Then came the Exposition Buildings and Grounds at San Diego, California, of which the memory will forever haunt every visitor.

In the Town of Tyrone, New Mexico, which followed, there came an opportunity for massing and grouping, which Goodhue took to the full, and more ornament disappeared. Then came the house for Mr. Henry Dater, at Montecito, and that for Mr. Cappell at Pasadena, as well as his own little house, and the larger one, unbuilt, at Montecito.

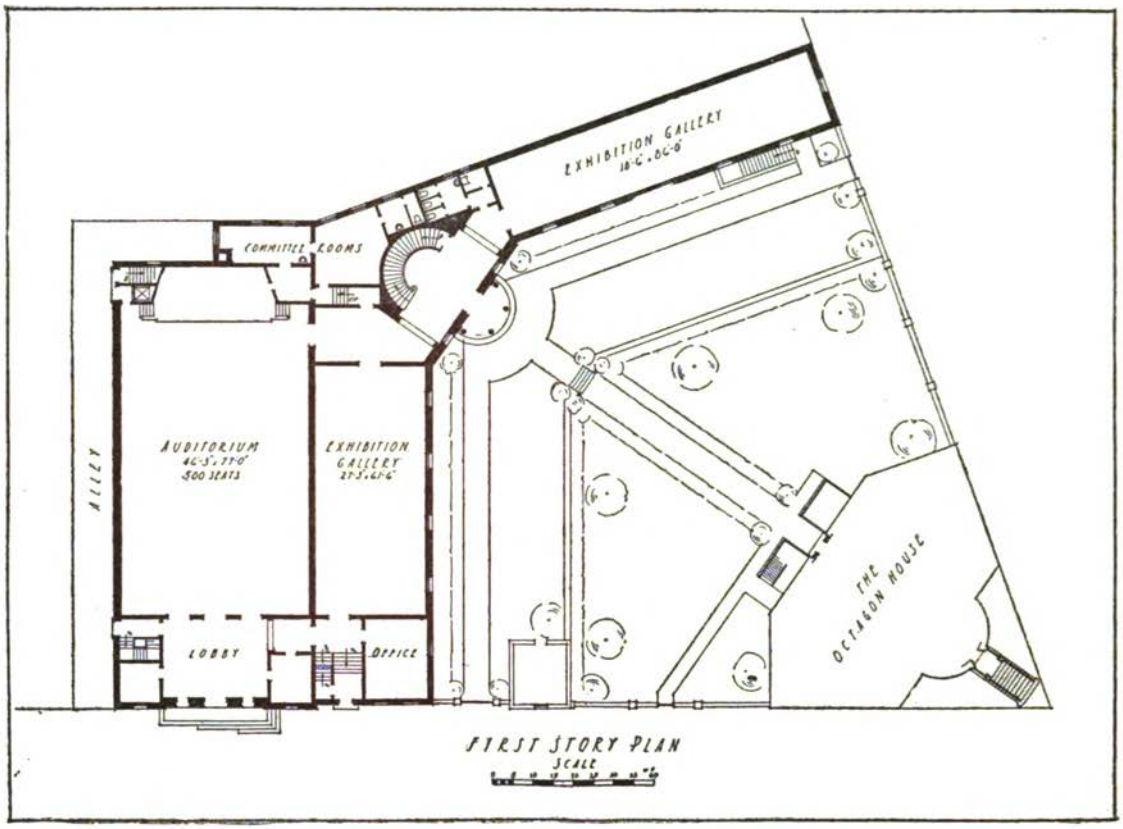
Followed the buildings for the Throop Institute, now the California Institute of Technology at Pasadena, and the designs for Oahu College and the Kamameha School at Honolulu, and then there came the Marine Corps Base and the Naval Air Station at San Diego. The stride was growing, the pencil that once let itself play with the joys of detail had become the tool of a man who no longer groped, but who marched confidently toward the light of a great vision. The Los Angeles Library and the Nebraska State Capitol, now in the building, were the forerunners, not of the gauntlet that Goodhue was to throw down, but of the faith that he was quietly weaving into an architectural guerdon. In the interim there came the Church of St. Bartholomew's at New York, where the *parti* was predetermined by the portico of the old church, which was to be taken down and set anew in Park Avenue. The original studies were Byzantine, in their *motif*, but these suited neither Goodhue nor the church authorities, and there finally was evolved an adaptation of the Romanesque, although always in the same playful manner in which Goodhue had worked in the gothic. His last finished building, opened but a few days after his death, was the Academy of Science at Washington, classical in all that the name implies, and yet devoid of that classicism which characterizes the Lincoln Memorial.

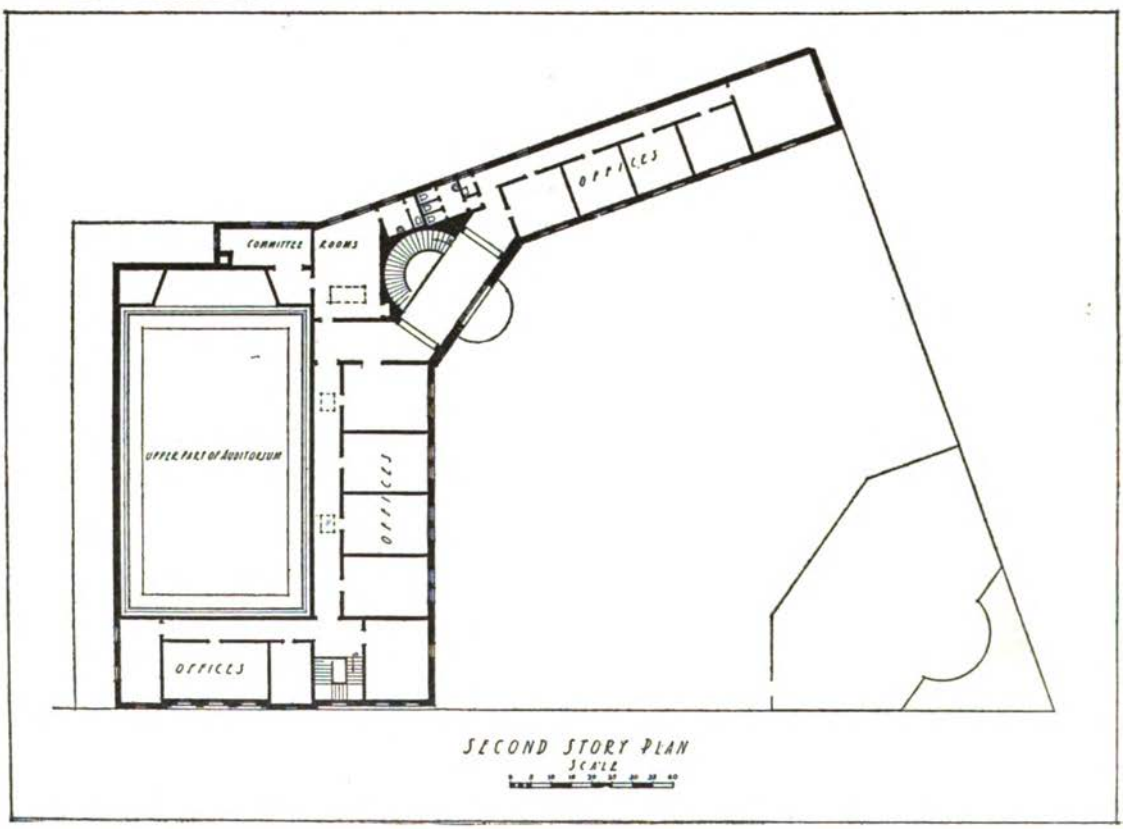
During these years, in which these buildings were designed, he gathered around him a group of brilliant young men,—young men who were in themselves creative artists, for he felt that in the practice of architecture no architect had a right to make draughtsmanship a job of sheer hack-work. He was more interested in the creative possibilities of a draughtsman than he was in a whole stack of magnificent drawings turned out as per order. Thus, as he became the inspirational center of his little group, he was able slowly to let slip the burden of detail. More and more he plunged into the study of pure structure, of mass, of sheer spaces made restful to tired and confused eyes, of decoration carefully concentrated to act as an undisturbing foil for the peace and quiet of great stretches of wall texture. Ever simpler and more simple were the forms he wrought, just as Pythios and Hermogenes, centuries ago and a century apart in their lives, plodded on towards the perfection of the Ionic order. Goodhue's was the harder task, one might say, for he had to deal with the accumulated mass of rubbish in the garret. He was far on his way toward an achievement which many of us believe would have attained to such heights as are seldom reached in any art, when, in April, only a few weeks after Bacon and Sullivan had gone, Death took him swiftly and without warning.

Great were the two Ionic seekers in Greece many centuries ago, and great have been the seekers of beauty everywhere and always; and if there be a spiritual Round Table where some common language brushes time and space aside, and where architects do meet, then I for one would ask nothing more enchanting than there to sit and listen to the flow of speech between Louis Sullivan and Bertram Goodhue, with Pythios, Hermogenes, and Henry Bacon sitting by.

C. H. W.

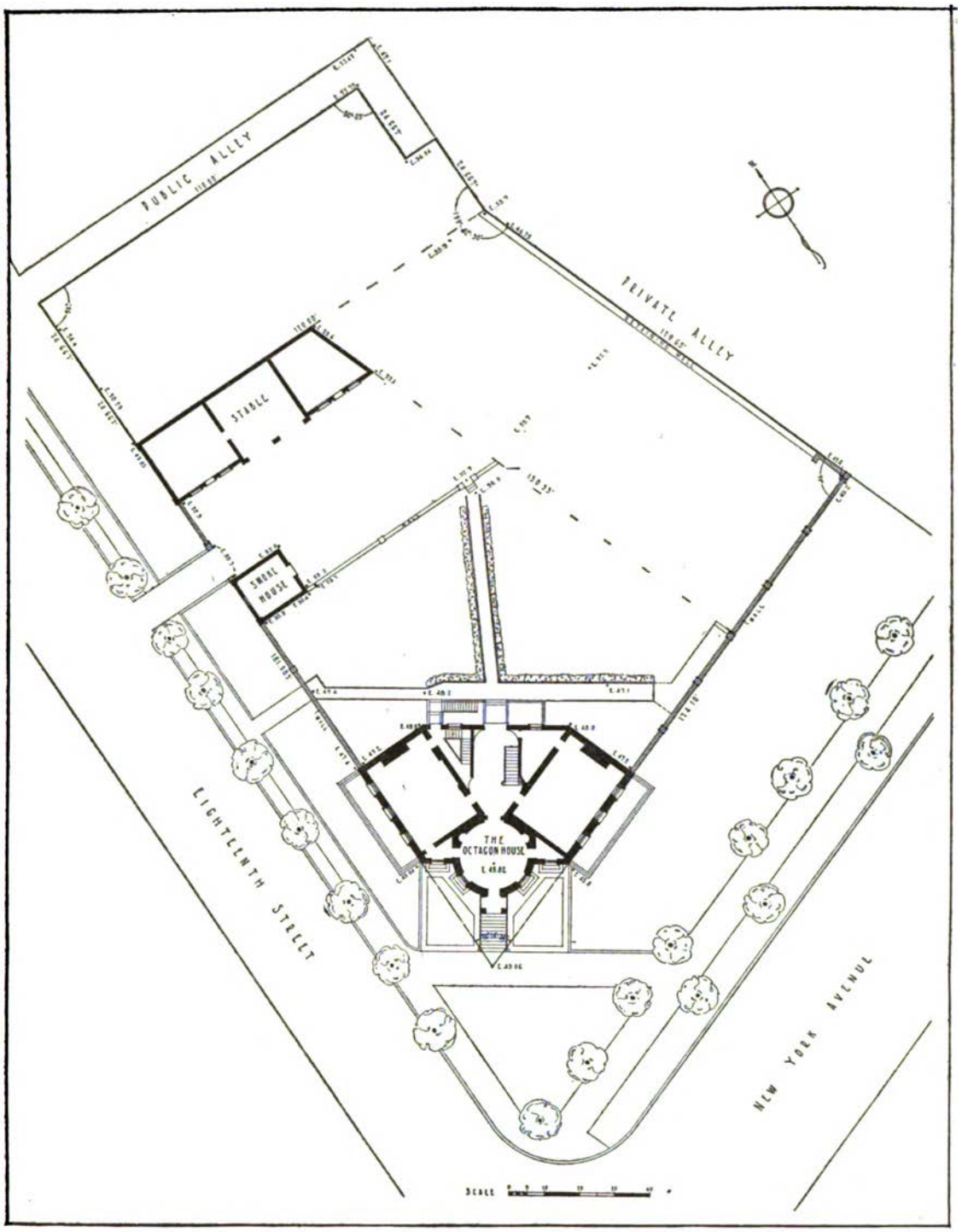
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THE PROPOSED NEW BUILDING AT WASHINGTON
THE AMERICAN INSTITUTE OF ARCHITECTS

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THE PROPOSED NEW BUILDING AT WASHINGTON
THE AMERICAN INSTITUTE OF ARCHITECTS

NOTE: The drawing reproduced upon this page is a plat plan, showing the present condition of the Octagon House and grounds, together with the additional lots on which two houses of little value still stand, but which, since they are to be removed, are not indicated.

The two floor plans upon the opposite page may be considered diagrammatic and subject to modification; the stable is to have its identity preserved; the Convention Hall may be of a different type, and so forth.

The supper room, service room, coat room, toilet rooms, boiler room and store room are to be located in the basement of the proposed new building.

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The Proposed New Building of the Institute at Washington [1]

The proposed new Convention and Exhibition Headquarters was authorized by the 56th Convention and was discussed further at the 57th Convention.

An interest in the project has been manifested among the membership which leads the Building Committee to present herewith preliminary studies with the purpose of securing full and frank suggestions and criticisms.

The Institute has determined that the Octagon House shall be restored and maintained as the historic mansion in which the Treaty of Ghent was signed. The Octagon House will be used in a limited way for the office of the Institute but in effect will be a museum piece of architecture, an exemplar of the residence work of 1800, which will be maintained for the public by the profession.

The Committee in preparing its studies for the new building, which is to form a background for the Octagon House, followed, it believes, the concensus of opinion as to what should be embodied in a building which is to serve as the Institute's Headquarters. The requirements, as they have been discussed in various Institute Conventions, are these:

1. Offices and Committee Rooms,
2. Convention Hall,
3. Exhibition Rooms,
4. Supper Room.

Mentioned seriatum it may be said:

1. Offices are needed for officers, committees, executive secretary and clerical staff. The offices should be of capacity sufficient for probable future needs and in the meantime may be rented to allied societies or to individual architects.

2. An Assembly Room, seating 500, together with lobbies and committee rooms adjacent, suitable for Convention purposes and for general lecture room uses and available for rent to the general public as well as to professional societies. The Corcoran Hemicycle is now too small. The only recourse seems to be for the Institute to hold its Conventions in hotels. That would leave a national organization owning the Octagon House and grounds as Headquarters, which it could use only in a limited way and not at all for meetings of its members.

3. Exhibition galleries of moderate dimensions should afford means of exerting an influence on the profession and upon the public.

4. A supper room with some accessories should be of use for entertainment in connection with Conventions, for Chapter or other meetings of architects, and for miscellaneous purposes.

America as a nation is on the threshold of development which staggers the imagination. Architecture will be the visible expression of the nation's life and growth. The architectural profession will have tremendous opportunities. If the American Institute of Architects is awake to its responsibility for the future, the question faces it, "Is this program too ambitious, or too modest, for its building in the Capital City?"

Every member is requested to answer this question by sending to the Building Committee some expression of his conviction. Let it come in the form of a criticism, of a suggestion in writing, or in drawing. Make the comment on the whole scheme or as to a mere detail. Prepare a good drawing, if you are so moved, or send in the most abbreviated sketch.

The Committee will appreciate your responses and will hope to accord due acknowledgment for helpful advice.

THE BUILDING COMMITTEE,
D. EVERETT WAID, *Chairman.*

The Question of Precedent [2]

The Case for Larceny

IN ATTEMPTING to recapture from the pages of the JOURNAL of the Institute the emotions stirred by listening to the famous discussion on Precedent (henceforward the model for all debates), it is interesting to note that, no matter how violently the distinguished gentlemen who spoke disagreed on other phases of the question, on one point at least they were unanimous. Some of them held that stealing from the dead was reprehensible, some that it was more or less to be commended, but not one of all their voices was raised in favor of the practice of stealing from one's contemporaries.

Now it would seem (considering merely the advancement of architecture and ignoring the legalistic and proprietary side) that this kind of stealing is not only the most innocent form of the vice, but is, on the whole, even laudable, and that on its encouragement and spread depends our chief hope for the future of the art.

Let us consider the motive of the plagiarist—the architectural plagiarist, that is, for Mr. Cram's *"Distinguo"* was well taken. Surely, the designer who adopts for his own purposes the solution devised by another does so in the belief that it fulfils the conditions of his problems better than any which he himself can devise, an indication of a becoming and too infrequent humility.

Let some casuist (and here again I appeal to Mr. Cram, who, as a mediævalist, may be expected to know what casuistry really signifies) decide what possible justification there could be for anyone who would deliberately reject the better solution and adopt an inferior one, merely that he might be able to point with pride and say, "Alone, I did it!"

In discussing precedent, the precedents for precedent should be given some weight, and every indication is that

[1] The accompanying plans appear upon pages 406 and 407.

[2] Other discussions of this subject will appear in forthcoming issues of the JOURNAL.

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when any artist of the good days which are gone hit upon some happy and appropriate expression, the others of his time fell upon it with shrieks of delight and dragged it to their caves in triumph.

Returning from consulting the Delphic Oracle on the interpretation of the new Mycenæan zoning law, the Grecian practitioner carried to farthest Bœotia the clever handling of the corner triglyph just originated by Arthemidoros the son of Pisander, and within an Olympiad it was standardized from the Acroceraunian snows to the Ford of the Fleece of the Gold. Pilgrims in lone mountain monasteries poured into eager ears the apt expedients by which the Norman craftsman had roofed a triangular bay without a collapse, and lo! so were triangular bays roofed thenceforward.

Is not a great deal of the old-time unity of purpose and expression, which we are accustomed to hear ascribed to the "dynamics of the time," the "common mind of the age" and other impersonal forces, really due to this happy, innocent, and inveterate habit of using whatever seemed to fit best, with no regard to the law of copyright and without any of this timorous compulsion to be different, and is not the contrast between past and present principally in this, that we are more self-conscious in our thievery and more prone to insist on our property right in our inventions and adaptations?

There is an ancient saying, attributed to the Jesuits, "Much good can be done in this world, if we are not too particular who gets the credit," and if the purpose in view is to get better architecture, and not merely to get better jobs, why is it not well to lay the stress on the use of the best forms, the most apt solutions, the most pat expressions, encouraging the designer to develop better forms, apter expressions, and abler solutions if he can, or, if not, to take them bodily where they are to be found?

After all, we must all depend in some measure upon what has already been done. Even the automobile would be hard put to it to survive without the wheel, and perhaps the best formula which has yet been suggested for good architecture is the one which the domestic magazines delight to quote in the springtime of the year:

"Something old and something new,
Something borrowed and something blue."

A great many people seem to feel that our architecture is not getting anywhere. May not this be because the architects are starting from opposite ends of the track and running violently past one another in contrary directions?

If mutual borrowing became universal, and the best which each could contribute went freely into the common pot and was freely drawn upon, the day might come at last when all the architects would be lined up for an instant at the same point and all facing in the same direction. If this could be brought about, the dynamics of the time and the common mind of the age would, for once, have an opportunity (so to speak) to "do their stuff," and the development of the longed-for epoch of virile, original, and American art—deeply based in tradition—and yet not so gosh-darned traditional either at that—could not be long delayed.

This of course ignores the point of view of those who may feel that they have all to lose and nothing to gain by such a program, that they need none of the ideas of others and object to others profiting by their own.

To such I can only recommend that they thoughtfully and prayerfully reread Kipling's ballad of *The Mary Gloucester* and see if they cannot find therein an assurance that, if they really have a vital contribution to offer the world, that most sincere flattery which takes the form of imitation will cost them nothing.

FRANCIS P. SULLIVAN.

The Question of Education[1]

Evolution or Revolution?

AS PREAMBLE to the announcement of a cure-all to be administered at once, if our architecture is to be rescued from complete ignominy, the least which is expected from a writer on architectural education is a vitriolic denunciation of existing systems. But, due either to the lenient influence of summer, when in the season of vacation school problems temporarily recede from the horizon, or simply to the mollifying effect of August heat, I cannot quite rise to the height of the occasion and convince myself that all is lost unless we bring the axe to the tree.

Mr. Albert Ferran, in the last number of the JOURNAL, is, however, more energetically inclined; and his paper on *The Teaching of Architecture in the United States* is a Parthian shot to which the personality of its author gives a keen point. With a number of the criticisms in this paper, I am quite ready to agree. But it seems to me that others are less justified, and due to some extent to a failure to understand fully the local conditions. It seems to me, too, that the ardent loyalty of Mr. Ferran to his Alma Mater of the Rue Bonaparte, and the proud memory of having belonged to the fellowship of the Villa Medicis may be largely responsible for his failure to appreciate anything but closely patterned imitations of these institutions, and for his blindness to a fact recognized by Pascal three centuries ago, that "what, on this side of the Atlantic is truth, on the other, is error."

I submit these notes as a contribution to the discussion inaugurated by Mr. Ferran, whose retirement from educational work no one regrets more than I, convinced as I am that men more than systems are of value in education.

To sum up briefly, his case against our architectural schools is that in common with other educational agencies, they "tend to lower the instruction to the level of the best results for a middle class of students." His remedy is: a School for Higher Architectural Education obviously on the model of the French Ecole des Beaux Arts, the history of which forms the largest portion of his paper.

[1] Other discussions will appear in forthcoming issues.

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In these last twenty years I have, on several occasions, contributed to magazines articles defending the Ecole —sufficient to show that I am far from being one of its adversaries. I know what I owe to the Ecole and what it has contributed to the architecture of this country. Nevertheless, I believe that—assuming it were possible —the importation of the organization and spirit of the Ecole would be a mistake. The fact that in France itself the Ecole is periodically denounced in the bitterest terms goes to prove clearly that even for the same race there is more than one opinion on the teaching of an Art, where we are no longer standing on the firm, logical ground of an exact science.

In France, the weightiest criticisms are directed at the alleged efforts of the Ecole to perpetuate the 17th century dogma of authority—of an official art—in opposition to the individualistic and liberal spirit of our time. Mr. Ferran has given us some chronological data on the old Academie d'Architecture, the ancestor of the Ecole and of the group of architects in the Academie des Beaux Arts. A more extensive study of this old Academie might easily lead one to the conclusion that those who believe in liberty in art have some fair grounds for taking issue with the academic spirit. The founders of the old school made their principal object not so much the teaching of architecture as we understand it today (and as Mr. Ferran suggests it) as the formulating of a Doctrine, and, as corollary, the excommunication of those who would not accept that Doctrine or live up to it in their professional life. As an illustration of this autocratic spirit, it may be remembered that compliance to the ill-understood principles of Vitruvius was the first standard to be applied in deciding upon the beautiful and settling upon rules of good taste. On this basis, the members of the old academy gravely ranked the famous architects, placing Palladio first, Scamozzi second, Vignola third, and so forth. Convinced that they were right, they had small tolerance for independence, and the incident, cited by Mr. Ferran, of Jean Francois Blondel's atelier was nothing but an effort to stifle competition.

But, it would be unfair to agree with those who hold that this old autocratic temper is still vigorous, and one must not take too seriously this thought expressed by a writer of note, "The old men are rigid in their ideas, which is why the Fiji Islanders kill their relations when they are far advanced in age. By this they are assisting the process of evolution, while we retard it by founding Academies."

In this country, academies are more or less harmless. It is difficult to see from what body we might expect the unity of Doctrine for which Mr. Ferran hopes. I doubt if it could be created by the Higher School of Architecture itself; even by the subtle process which in Paris has brought about a division of the ateliers into groups of those which are successful, and those which will never be successful, and which has reduced the Provincial schools to the rank of Preparatories, notwithstanding the government act giving them equal privileges with Paris. I imagine that in this country such a monopoly might encounter stiff opposition before it had gathered strength to assert itself with any force.

It must be remembered that in France, centuries of centralized government have accustomed people to the rule of an administration somewhat akin to the system of government carried out in China by the Mandarins. In America, government bureaus have so far taken no part in æsthetic questions, an indifference for which we may well be thankful, when we consider what effect an election might have upon our most cherished creeds; the forty or more schools of Architecture in the United States, with their thousands of students, are, indeed, a little shy of the "beneficial measures to be imposed on them."

As I said before, the system in use in Paris of teaching architecture has been largely adopted in this country, insofar as it does not conflict with other principles of education which were, and are still, considered important on other grounds. In our schools the completion of the required work is recognized by the conferring of an Academic Degree, as abroad it is recognized by the Diploma. But the Academic Degree rewards a shorter period of study than the Diploma; so that, considering the average student in both cases, it is evident that the one who takes the Diploma is more mature and has a more complete training than one who takes our Academic Degree.

Both of these degrees cover, of course, the widest range of talents, since no examination or competition has ever succeeded in a more accurate grading of merit than a fairly gross approximation.

The French attach more importance than we do to scholastic achievements. The heroes of the once popular novels of Mr. George Ohnet were usually endowed by their creator with the distinction of having come with first honors from the competition to this or that school —which, if it proved the French public to be imbued with a praiseworthy faith in the value of science, indicated, no less, a laziness which preferred rather to judge a man by the number which was pinned to his coat while he was still in school, than to discriminate in regard to the genuine value of what he had actually accomplished in his life—and here again is the Mandarin rule. In this country we are satisfied to judge a man according to the executed work which he turns out of his office; and in this we may count ourselves the wiser, for a list of the accepted leaders in our profession would show indifferently Beaux-Arts men, American University men, and men who had no other training than years of office work.

Mr. Ferran finds fault with what he calls the competition between universities by means of catalogues. There is no doubt that the description of courses in the catalogues are sometimes misleading as to their real value; but so far as this competition between universities is considered in itself, I think that it has brought forth more good than evil; for through it, and without appeal to the superior authority advocated by Mr. Ferran, the schools have arrived at a program of studies which is fairly uniform throughout the land. Competition has usually the result of spurring to effort the weaker members; monopolies, on the other hand, have a tendency to grow drowsy and can soon be distanced by more active agencies. So far, the United States believes in the value of competition, and only when we have become converted to state monopolies will it be time to think of means for controlling the independence of universities.

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In Mr. Ferran's paper there are criticisms of more weight than those which I have just considered. He rightly takes a vigorous stand against our attempt to combine a general with a professional education. I do not deny that, in going over the schedules of our schools, I can find few subjects definitely without value to the profession or as means of general culture for the student's mind, but a strong objection to a large proportion of them is that there is simply not time enough in the four or five years which a man devotes to his architectural studies more than to scratch the surface of these subjects; and superficiality is an inevitable result. Thus the whole question reduces to a consideration of the length of time which is required for the proper equipment of a professional man.

The French student, with his more devout belief in school training, is willing to pay the price, and spends his six or twelve years and more in the school. The American has his doubts that this long period of preparation is worth the while. After all, architectural schools are of comparatively recent origin, and there were good architects before they had been thought of. Even today the countries of northern Europe, Italy, and, if we share Mr. Ferran's views, the United States, are without schools worthy of the name, at least in the opinion of the orthodox; nor do they have a Grand Prix de Rome; yet can it be said that they have failed entirely to produce good architects? Even to one who believes, as I do, that the Schools of Architecture play a definitely important part in the modern training of an architect, there seem to be good reasons to believe as well that there can be too much of a good thing, and that the extension of scholastic training much beyond the school age may be more productive of harm than benefit. The student who is too long sheltered from contact with the real world and its invaluable lessons cannot but be handicapped by disadvantages which may tell heavily against him in his career.

A few years ago, several eminent men of our profession drew up, as members of the Committee on Education of the American Institute of Architects, a report advocating the limitation of the school curriculum to subjects pertaining only to the general education of the student, and to a merely elementary architectural education; the real architectural studies to be pursued out of the schools, *in the office of practicing architects*. This proposal had to encounter the objection that it hypothesized two uncertain conditions; first, that the student seeking higher education should be able to find a position in the office of an architect of merit; and, second, that this architect of merit should have few enough men in his office to allow him to acquire more than casual personal understanding of his assistants as individuals, and sufficient leisure to give them advice properly adapted to their talents and temperaments. Nevertheless, even where these ideal conditions are not fulfilled, the work accomplished in the office of a practicing architect, and, later, the first years of his own experiment in the profession, provide the student with an education which no school can supply. It is interesting to note that in France the faith in a protracted period of study is peculiar to the Ecole des Beaux-Arts; other schools, such as Polytechnique, Normale, Centrale, les Chartes, and so on, are organized upon the belief that a three years' attendance is ample, for the very reason that they also count upon the years of professional practice after the school period for the fuller development of their pupils.

Generally speaking, the salient fault with the American schools in my opinion is that the time which they allow for architectural studies, too short in the first place, is further broken up by the endeavor to teach general subjects, or cultural subjects (which sounds so much better in catalogues), simultaneously with architecture. It is a survival of earlier methods of education, a legacy from the time when architectural courses were surreptitiously introduced in the college curriculum or in the engineering courses. Gradually, as the necessity for professional training was recognized, the academic subjects became more and more crowded until, in most of our schools, we have reached the point where the time schedules are seriously overfilled.

The School of Paris has left the decision in regard to the amount of general study suitable for the future architectural student, to the student himself, or to his parents. In our universities the value of practically a year, or even more, is cut out of a four-year course for this general education, although the full four years is little enough time for a student to advance from a complete ignorance of architecture to the point, for instance, where he is sufficiently equipped to compete in Class A of the Beaux Arts Institute of Design.

I am inclined to think that the student should acquire his general education before he enters the architectural school. But it is important that the time allowed for these preliminary general studies should not be so protracted as to postpone too long the beginning of his architectural training.

This, in my opinion, is the main objection to the Academic Degree as a preliminary to the degree in architecture, requiring, as it does, a period of eight years of college work all told; although, as I am well aware, many universities are accepting the seven-year period in other professions, such as law and medicine.

The student who finishes his academic course at twenty-two years of age, or more, without having acquired an elementary training in free hand and mechanical drawing for instance, may come to realize that what he has gained from his full college course is offset by a lesser flexibility of mind and hand.

Recently, there has been a movement for extending the architectural course to a period of five years, retaining the old scheme of semi-cultural, semi-professional training. This plan is heralded as a step forward by such good authorities that it ill becomes me, perhaps, not to evince an equal enthusiasm. But it seems that an extension of time is of far less importance in education than the way in which a reasonable amount of time is used. The four-year course, properly divided among the subjects which form a valuable basis of architectural education, should be long enough for the average student to acquire that training in fundamentals on which he will build his personality. If it is crowded with general subjects, it is too short; and, if the five-year course is a pretext for adding still more subjects, nothing will have been accomplished by the change. Much better results would be obtained by transferring the college courses of

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the school of architecture to the class of entrance requirements for those schools. This opinion, I know, is not regarded with special favor in this year of 1924; but in view of the rapid changes which are taking place, one must not be too sensitive to the charge of entertaining unfashionable ideas.

I have mentioned as desirable a raising of the entrance requirements. I do not think, however, that the entrance examination should ever become a competition as it is in Paris, with a limited number selected from the total number of candidates. In artistic training, competition as a means of sifting out the men of ability is largely a deception, and there is no test upon which we can base a sound prediction of a student's development two or three years hence. The superficially good man may get through easily and even brilliantly, where often a mind of far greater ability may be slow to unfold itself. It is hardly fair, therefore, because American universities have opened their doors to all those who seek an education (in which they do not differ from French universities), to accuse them of sordid self-interest, and an ignoble attempt "to attract as many students as possible irrespective of their ability."

I said, before, that the American graduate is less mature and knows less than the French Diplomé. But this does not imply that our methods are backward in comparison with the Paris methods, and one need look no further for an explanation than to the fact that the French Diplomé has an average of six years' training to his credit, where the American graduate, after the time devoted to cultural studies is deducted, has hardly three. On the other hand, almost every graduate of an American school enters the office of a practicing architect for a few years before starting a practice of his own; while the French graduate, who often has lingered on in the Ecole until he is thirty years of age, is anxious to start in for himself at once, and frequently does so lacking some very important qualifications which no school can teach.

When everything is considered, it seems to me that the American schools have been exceedingly efficient, however true it may be that they cannot boast the so-called "brilliant pupils" which the Paris School may have produced; men with eight, ten or even fifteen years' of attendance to their credit. Nor would I, on the other hand, venture a criticism of the French institution were it not that I have, to strengthen my views, the learned opinions of some of the masters to whom I owe the little which I learned in the School.

Mr. Ferran's proposal for a Higher School of Architecture, with, as a basis, the present Beaux Arts Institute of Design re-organized as he suggests, brings us to a problem involving points too complicated to be dealt with in so short a paper as this. The first question which presents itself to our mind is whether this centralization is desirable; and although for more than twenty years I have co-operated with the Beaux Arts Institute, and in this time have had frequent opportunities of discussing with its founder and with the Committee on Education both the future and the limitations of its work, I have come to no conviction which satisfactorily answers the question. As to the possibility of Mr. Ferran's plan, I can reach no other conclusion than that an attempt to centralize the education of the architects of a country of a hundred million people is not a task to be lightly undertaken.

To the dark pictures now and then painted of our schools, I prefer to oppose the view that the schools in any country are a fairly faithful image of the ideals of the profession, and that this is more particularly true of our country where the schools, unhampered by antiquated traditions, spurred by a healthy rivalry, and sensitive to the criticisms of their alumni, who have become practitioners, are eager to profit by experience, and prompt to accept new suggestions, and to revise their programs of studies. I know as well as anyone that they have not reached their final development; that, in common with every human institution, they are subject to improvement, that their curriculi express a somewhat crude average of the subjects considered of first importance in professional life, and their methods, an attempt to teach these too numerous subjects in too short a time. But, on the other hand, they are a native variety, developed in the last half century, and having in this span of years become thoroughly adapted to their environment—to what Taine called "the prevalent moral temperature." Following a course parallel to that which our architecture itself has taken, they have never been shy in borrowing from European methods whatever seemed to them worth having; the opening of new paths they have wisely set aside for the future, contenting themselves with the building of solid foundations; and that they have not altogether failed in this attempt needs no other proof than the ever-growing number of their pupils, and, still more significant, the large percentage of foreign students which they attract. Without too much self-complacency, we might conclude that what is needed is evolution rather than revolution.

PAUL PHILIPPE CRET.

The International Conference in London

The first International Congress on Architectural Education ever held in England took place at the Royal Institute of British Architects, London, 28 July to 2 August, 1924. Seventeen countries sent representatives and the work of more than a hundred schools of architecture was on exhibition. A reception by the President and Council of the R. I. B. A. marked the opening. In the galleries were hung examples of the work of students of the French and American Academies and the British School in Rome. In the library of the Institute rare architectural books and original sketch books of famous architects were on view.

On Tuesday the subject was "Architectural Education in the Past." The first paper, by M. Paul Leon, Directeur des Beaux Arts, was a marvel of clarity and compression. In the twenty minutes allotted, M. Leon sketched with utmost precision the history of architectural education in the past in France.[1]

Professor Pietro D'Achiardi (Italy), in the second paper, said that the marvelous continuity of Italian archi-

[1] This subject was covered by Professor Ferran in the JOURNAL for August.

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tectural tradition which had endured now for over twenty-seven centuries found its direct explanation in the continuity in thought and feeling of the Italian race. The great period of architectural revival in Italy, from the 12th to the 14th century, saw the reappearance of the true architect, often an artist who cultivated other arts. With the rise of the Academies all teaching was directed towards the antique. The oldest and most famous of these—S. Luca in Rome—after hundreds of years of great traditions, at the time when Italy became a nation—was, like the other academies, gradually relinquishing its historic mission; the training of architects had now passed mainly into the hands of the State.

Professor William A. Boring (Columbia University), alluded to the early buildings in America, copied from good English and Dutch examples, but modified to suit the climate. This style prevailed until half a century after America became independent, but then deteriorated, and during the period of the Civil War the Americans hacked and hewed out a style which for ugliness had never been surpassed. Later, for their masters of design, they appealed to France, and trained American architects began to return from the Ecole des Beaux Arts about thirty-five years ago. Still, legislators in America pretended a great distrust of architects in private practice. If the government were to foster education of architects that attitude would probably change for the good of public buildings and the advancement of art. With buildings framed in steel, masonry was only a flesh-like covering, yet they still felt it necessary to clothe their buildings in accordance with primitive methods. Their problem was: How far could they depart from primitive forms to meet new conditions and remain in touch with accepted standards of truth and beauty?

Mr. Paul Waterhouse, speaking for England, said when they realized how much had been done in other countries for the education of architects and how little had been done in England it was a wonder that any of them had grown up into anything like architects. Very little was known of the training of the great men of even the 17th century. Wren, in architecture as in other aspects of his remarkable life, was his own disciple. With the 18th century, and indeed with Wren, Gibbs and Inigo Jones, there came an intensely important factor, the belief that without some study of classic and Renaissance art on Greek, Roman, Italian or French soil no architect could be completely equipped. Pupillage in Victorian days was sometimes a farce but was often a glorious discipleship.

A discussion followed in which M. Victor Horta (Academie Royale de Belgique) spoke of teaching in Belgium, M. Robert Boker (Russia) spoke of the Russian debt to the Ecole des Beaux Arts and Professor Anoni (Italy) of the relation of artist and engineer.

A large number of delegates lunched at the Architectural Association and inspected the work of the school.

In the afternoon members of the Congress attended a garden party at Grosvenor House (lent by the Duke of Westminster) where the work of the foreign schools was pre-eminent both for power of design and beauty of draughtsmanship. Special mention may perhaps be made of the work sent by the University of Pennsylvania, the Carnegie Institute of Technology and the Massachusetts Institute of Technology. The Technical College (Delft, Holland), sent an attractive collection of drawings of a very different style, some arranged in portfolios illustrating a five-year course. Noteworthy too for modernity combined with severity was the work sent by Austria. The drawings were, however, small and sketchy.

Although the Ecole des Beaux Arts was not fully represented, the winning design for the Chenavard Prize by Defrasse for a "floating aeroplane station in the Atlantic" was the most imaginative design in the exhibition and far and away the finest set of drawings. There were also exhibits from schools in Czecho-Slovakia, Denmark, Hungary, Italy, Norway, Portugal, Spain and Sweden.

The exhibits of the schools of Great Britain and the Dominions were on view at Devonshire House. There were designs for Institute prizes from 1838 to the present time. Of the current work of the Schools the drawings sent by the Architectural Association School and Liverpool University were the best.

Wednesday was devoted to "Architectural Education in the Present." Signor G. Giovannoni (Italy), stated that in Italy every civil engineer had an architectural education. The relations between architecture and the other arts had never been completely severed, and archæological study, survey and excavation in Italy had greatly benefited by this knowledge.

Professor William Emerson (Massachusetts Institute of Technology) said that in America they were working for one great objective—the more general recognition of architecture as a profession for the practice of which adequate preparation was essential. Their efforts were being directed towards the teaching of fundamental principles rather than to the study of countless details. An endeavor was being made to adapt to local conditions the "atelier" system, and, with it, logical procedure in the study of design, for both of which they were indebted to the Ecole des Beaux Arts in Paris.

Monsieur Defrasse (France) said that a spirit of unrest was prevalent in the teaching of architecture. There were two currents of opinion, one favoring a healthy traditional style, the other believing that the use of new materials should modify ancient forms and proportions. The first attempts to apply the second theory to the decoration of façades and interiors were not happy. Brutal shapes resulted with no connection between the different parts of the building. Some students in France, however, had resolutely attacked the new problems, and new relations in proportion were emerging.

Mr. W. Curtis Green, A. R. A., speaking of training in England, said that the new factor for England was the school of architecture attached to a university or other body, as opposed to the old system of pupillage which the rush of modern practice had made almost impossible. Professor A. E. Richardson (London) criticized modern tendencies in training and said that training in design as at present constituted was too ambitious. Professor B. Pite (London) urged architects to clear their minds of the cant of copying merely the surface of antiquity. Mr. Howard Robertson (A. A., London) stressed the importance of "function" in design. The chairman, in summing up, said that though the school system in England had answered extremely well on the whole, it had its weak points. Students tended to adopt passing manner-

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isms and did not pay enough attention to the past. Further it was a disadvantage that the teaching staff was almost inevitably composed of young men without much practical experience. On Wednesday afternoon the delegates went down the Thames to see the work of Inigo Jones, Wren, and others at Greenwich Hospital.

The subject of Thursday's papers was "Architectural Education in the Future." Dean F. H. Bosworth (Cornell University) said that the spirit of thought today was an analysis which searched for causes and of which the architecture of tomorrow could not but be an expression. Architectural education was formerly under the control of the practitioners, but in America they had now redressed the balance between theory and practice. Under the apprentice system the pupil too often unconsciously set as his goal a faithful copying of his master; he learnt his style, mannerisms and idiosyncrasies, but did not grasp the essential spirit of which they were the expression. He grasped the form, not the substance; learnt how to speak but had nothing to say.

M. Leon Jaussely (France) read what was perhaps the finest of all the papers. It was an inspiration to hear a great teacher speak so earnestly and yet hopefully of the difficulties of the future. M. Jaussely said that the problems which the architect was more and more called upon to face were constructive and of increasing audacity and complexity. This must lead the architect to become more and more a constructor, not in the narrow professional sense but in the highest sense. He could no longer be simply an artist who, as was often the case today, conceived merely the decoration of the forms arising from the calculations of the engineer. He must himself imagine the forms, completely, both construction and decoration being the product of one brain. The evolution and progress of architecture lay in the fusion of two spirits at present sharply distinct—the constructive spirit and the decorative spirit.

A paper by Signor G. Giovannoni (Rome) described the coming introduction in Italy of a State entrance examination, quite distinct from the graduation certificate. Mr. H. V. Lanchester (England) said that England should adopt toward architecture the same attitude adopted toward political science; from the present systems something superior should be developed. He paid a tribute to the vitality of architectural education of the present. Such defects as existed were due to the steamroller labelled "curriculum" which aimed at turning out every student with a certain uniform acquirement of knowledge. Of course it could not succeed, and a good deal of harm was done. It disguised inherent qualifications and militated against individuality.

Professor C. H. Reilly (Liverpool University) defended the schools against the criticism leveled against them by English architects at the Congress. Referring to the architects of the 19th century he said that they gave England egotism and rank individualism. In place of the urbanity and continuity of the 18th century, England had a riot of free architecture which produced streets like Oxford Street and Fleet Street in London. The individualist of the 19th century broke through all the rules and restraints which had grown up through centuries, and today nearly all English buildings thus were overloaded with unnecessary features and ornaments. Modern American buildings—in a less degree French buildings—were clean and restful when compared with English. Only the cooperative spirit, the sense of responsibility to the community could successfully combat individualism and restore something like order and decency to English towns.

Mr. C. R. Ashbee (England) expressed the opinion that schools were imperfect instruments of education, the proper place of training being the workshop. Among others who contributed were Mr. Howard Robertson (A. A., London), Prof. Lethaby (Royal College of Art, London), Dr. Carl Brummer (Denmark), Mons. A. Defrasse (France), Mons. Horta (Belgium), Dr. Bures (Czecho-Slovakia), and Prof. Anoni (Italy).

In the afternoon members of the Congress visited the British Empire Exhibition at Wembley and in the evening attended the Congress banquet. On Friday the whole day was spent at Cambridge visiting all the colleges possessing architectural interest. Saturday was devoted to St. Paul's Cathedral, the City Churches of London, the British Museum, and Westminster Abbey.

There is no doubt that the Congress was a great success. The papers and discussions and the informal talks between architects of so many nations will have done much to broaden the outlook of all who attended the Congress, and will have given them renewed vigor and inspiration.

H. CHALTON BRADSHAW.

The Secretary's Page

41. CHAPTER REPORTS. Vacation time is here, the middle of the summer is upon us, thoughts of the architects and the Chapters, more or less, automatically get away from the routine and the result is that the Secretary has heard from but four Chapters in the last month —KENTUCKY, PITTSBURGH, NEBRASKA and CHICAGO. The Illinois Society Monthly Bulletin is with us and as usual is full of interest.

The PITTSBURGH CHAPTER is taking a very definite interest in the election of new members to the Chapter and is suggesting an intensive study by the Chapter members of all proposed candidates.

The NEBRASKA CHAPTER seems happy in its arrangement for definite quarters at the Studio and its members are discussing among themselves, and considering placing before the Institute, the very important matter of membership control. They are asking if there is not some way whereby members who show no interest in either the Chapter or the Institute and who attend no meetings may not be dropped from membership.

42. TIME ELEMENT IN CORRESPONDENCE. These United States are very large and it takes a number of days for a letter to travel from the Atlantic to the Pacific coast. Frequently this is not taken into consideration by Committee Chairmen, although it has become a routine matter in the Secretary's office.

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For the benefit of the Chairmen of Committees the Secretary takes the liberty of calling to their attention the fact that it takes from five to seven days for a letter to travel from the Atlantic coast to the Pacific coast and a correspondingly long time for a letter to travel in the reverse direction. The Secretary's office always allows from eleven to fourteen days for the round trip, unless the situation is such that telegraphic communication is involved. Hence the Secretary suggests that time be allowed for the travel of the letters and time be allowed for the preparation of the correspondence.

43. HARLEQUINADE. A very delightful little pamphlet has just arrived at the Secretary's desk and the Secretary cannot resist mentioning it to his readers. It is entitled *Harlequinade* and is the Architectural Association's students magazine, published monthly during term time, nine numbers each year. The Secretary recommends its perusal. This little magazine rightly characterizes itself as "A magazine of humor for those interested in the lighter side of the architectural profession." (The JOURNAL'S Book Shop will take subscriptions.)

EDWIN H. BROWN, *Secretary.*

Public Information

Summer is dull in this department, but thanks to the energy of the SOUTHERN CALIFORNIA CHAPTER we are able to publish information that may be highly suggestive to other Chapters:

How much the rapid growth of the Pacific Southwest has helped the SOUTHERN CALIFORNIA CHAPTER of the American Institute of Architects to increase in membership and influence would be hard to determine, but thanks to the wise leaders of the past and their devotion to the Institute, there has resulted a noteworthy success in handling Chapter affairs, in settling cases of violation of ethics, competitions, controversies of a professional character and in the initiation of better ordinances and regulations and architectural conditions.

Since the Chapter was organized in 1894, its Executive Committees have constantly followed the policy that the membership is entitled to staunch support, intelligent advice, technical information and entertainment in return for their interest in the organization. Inversely it has been proved that when members are afforded the benefit of an active, wide-awake organization they are willing to give more freely of personal effort, time and money. Chapter meetings are held each month and enlivened by well-chosen speakers and by illustrated lectures of interest to the profession; technical discussions are encouraged and the entertainment is varied in character and by changes in the place of meeting. Local conditions make possible informal gatherings at beaches, country clubs and in the mountains. Men's minds seem to meet more readily after sitting around the same camp fire or putting on bathing suits in the same tent. Joint meetings with other Chapters and other professional bodies have broadened the interests of all and established more cordial relationships. Beside all this there are several special features of Chapter work, which, although not original in conception, have been undertaken with special emphasis and along unusual lines.

First of all, in 1918 was established a precedent of granting awards to architects for merit in work designed by them and executed during the current year. This custom has now become an annual event of importance in the local architectural world. Honor Awards, as they are now called, have been carefully classified to correspond with distinct types and uses of structures and the certificates of these Awards are annually issued. Most important is the granting of Awards to owners and contractors in addition to those to architects. A due amount of publicity is given to this procedure and the award is made at a banquet to which are invited distinguished persons and all those to whom certificates are to be presented. It is surprising to note that the attendance at these meetings is almost 100 per cent. so far as the recipients of the awards are concerned, and their pride in having their efforts recognized warrants the effort.

The architectural exhibition of 1923 was well received, as indicated by an attendance of over 30,000 people. In this was shown a prevalence of original and distinctive design. Already Southern California is developing its own definite characteristics which deviate from old precedent without violating well-established principles. The influence of Mediterranean architecture is felt in the bright color of tile roofs, mosaics and colored panels, and in the texture and broad sweeping surfaces of plaster enlivened by the play of shadow of cornice, foliage and deep reveal. Here the variegated masses of planting and flowers take an important part. For 1924 the exhibits were confined to residences. The public enjoyed this limited presentation and the visitors spent hours studying the photographs and plans.

Following the splendid work of the Institute Committee on Contracts in standardizing the documents and instruments of architectural service, the "paper work" of the architect's office has been reviewed by a committee of the Chapter. Local conditions demand special methods, and examples of forms and procedure used in individual offices have been presented at meetings followed by criticism and discussion. This has afforded an opportunity to all, and especially the younger architects, to benefit from the experience of the older members of the profession.

The Chapter believes that Institute influence should reach to the school work of the architectural student, and its members have given much time to the preparation and criticism of courses in the architectural schools and departments in the district. The Chapter has always tried to lend its support and undertake the roll of an older brother to the Architectural Club, which is composed largely of draftsmen. In this city, as elsewhere, it is an organization which "needs a friend." The Club's meetings, its activities and its atelier are encouraged and assisted by members of the Chapter. It presents an annual prize for meritorious work in one of the architectural schools and is doing all in its power to assist draftsmen and younger architects.

In public service the SOUTHERN CALIFORNIA CHAPTER has been privileged to take an active part. As a result there is today a very strong representation of the Institute in local departments, commissions and committees relating to building and architectural interests. These men are giving their best effort to making the architectural development of the community better in design and sounder in execution.

JOHN V. VAN PELT, *Chairman,*
126 East 59th Street, New York City.

Professional Relations

The first annual conference of the Association of Professional Men's Clubs was held at Des Moines, 13-14 August. Organized in March of the current year, the

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Association now has clubs in Des Moines, Minneapolis, St. Paul, Duluth, Milwaukee, Sioux City, Omaha and Kansas City, with a combined membership of about 600. The two days' conference was devoted to aspects of the interprofessional relation and to the social benefit which can only flow freely when all the professions combine to place their skill and knowledge in the service of the common welfare.

The officers elected for the ensuing year were as follows:

President, Thomas R. Kimball, Omaha.
Vice-President, Dr. William Jepson, Surgeon, Sioux City.
Secretary, Kay Todd, Attorney, St. Paul.
Treasurer, Elmer McDevitt, Attorney, Duluth.

From Our Book Shelf

In Mediæval Craftsmanship and the Modern Amateur[1], Mr. Newton Wethered has produced a book full of pleasant suggestion for him who wishes to undertake a practical study of the minor crafts. As its title implies, it is addressed especially to that class, whose numbers appear to be legion, which seeks amusement in the easier and showier fields of craftsmanly endeavor, and it might not inappropriately bear the sub-title, "Little Steps for Easy Feet."

It would be carping, however, to criticise too severely a book so entirely unpretentious, which gives its directions so concisely and clearly, and is, withal, so stimulating to the imagination. One might only wish the subjects chosen for illustration had not been quite so artful and so crafty.

GEORGE HOWE.

In Rural France

"It is astonishing"—as the authors say—"that these small buildings have received so little attention as compared with similar types of other countries." And this very inspiring book[2] of photographs and drawings mostly by the authors themselves and not from Cartes Postales (as is the case with another book we know on similar subjects), surely tempts one to sell his shirts and take the next Paquebot à Classe Unique, straight for Le Havre. This lengthy preface is by way of an introduction to *Small French Buildings* by Coffin, Polhemus and Worthington, who on foot and pedal went through the pleasant, peaceful Rural districts of La belle France and found the intimate side of her tender, tempting *beauté.* The authors have carefully avoided the things of size and style and have put between the covers of their book the simple, natural *little* buildings that all have *style.* They remind us of a pleasant stay of several months in a little French Village on the Loire, where we started out every morning for la Poste, and never, never could get there because of the numerous invitations to Monsieur l'Américain to *venir sous la tonnelle pour un petit coup de vin blanc.*" Why indeed, has not more ink been expended in the publication of these little Village buildings and Farm groups, so natural, so honest, so comfortable to look at and to live in? Fortunate indeed is it that the pictures are not in color—else there would be a general exodus from our sacred shores of all who have been *there* once. This fine book touches only the surface of an almost Virgin field. One is tempted to wish that Professor Kingsley Porter were perhaps a little less Archæological, so that he might finish off a tremendously useful and instructive life with a thorough covering in his own complete fashion, of this delightful field—it is almost hopeless to expect any ordinary Publisher to undertake anything so pleasant as an "Expedition" to explore and put before the Professor the *little* things that make life so lovely in the Land where the loveliness of life is so well understood and so generally demonstrated.

H. F. C.

[1] Published by Longmans, Green & Co. 1923.

[2] *Small French Buildings.* By Coffin, Polhemus and Worthington. Scribner's, 1921.

Seasonal Building Operations

The findings of the survey conducted by the Committee on Seasonal Construction in the Building Industries, under the auspices of the Department of Commerce, indicate that building operations can be carried on without hindrance in inclement weather. The introduction of the steel frame in buildings has in part replaced the high masonry load-bearing wall, which could not easily be constructed in cold weather because of numerous inherent difficulties, and has also allowed for improved methods of construction, says the report. The steel frame provides independent support for panel walls and floors, and for suspended scaffolds, canvas and other temporary shelters which render winter conditions more bearable. Requirements that steel framed floors be planked over as a safety measure have resulted in the installation of permanent floors instead, which affords additional protection to workmen. It is urged that individuals interested in building endeavor to maintain all-year building activities by scheduling work at times when the pressure of general construction is not at its peak. Further data on the subject may be obtained from the Division of Building and Housing, Department of Commerce, Washington, D. C.

Current Activities

Structural Service Committee Producers' Research Council

Annual Meeting of the American Society of Testing Materials. (Professor Thomas Nolan, delegate of the A.I.A.) In addition to representing the Institute on Committee C-1 on Cement and C-7 on Lime Mr. Nolan has just been made a member of the Committee C-3 on Brick.

All the forty-one standing committees of the A.S.T.M. have been unusually active during the past year. Forty-six subjects are covered, some of them of interest to the architect, although many are merely reports of progress. Among the more important subjects covered by these are the following. Bituminous Waterproofing and Roofing Materials; Slate; Fire Tests of Materials

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and Construction; Zinc Coating of Iron and Steel; Defects and Their Influences on Strength of Structural Timbers; Preservative Coatings for Structural Materials; Corrosion of Various Metals; Effect of Variations in Exposure on Varnishes; Tentative Specifications for Concrete Building Brick; Lime; Gypsum; Hollow Building Tile; Iron and Steel; Road and Paving Materials; Concrete; Cement; Drain Tile; Wrought Iron; Cast Iron; Recent Investigations on Cast Iron Pipes; Calcium Chloride as an Admixture in Concrete and Report of the Joint Committee on Concrete and Reinforced Concrete.

The Staining of Limestone Masonry is an important subject but one that cannot be considered directly by any committee of the A. S. T. M. Mr. Nolan has, however, started some action which may result in information later of value to the architectural and engineering profession. He also had some conferences regarding additional tests to determine the relative holding power of smooth, coated and barbed nails and hopes later on to be able to present a brief of the results of tests.

Complete reports and all papers will be published in the Proceedings of the A.S.T.M. For a summary of any of the various papers and abstracts the reader is referred to Professor Nolan's report, copies of which can be obtained from the Scientific Research Department of the A.I.A., 19 West 44th St., New York City.

At the Annual Meeting of the Producers' Research Council Affiliated with the American Institute of Architects.

The following officers for the ensuing year were elected:

Chairman—Mr. O. C. Harn, National Lead Company.
Vice-Chairman—Mr. Lyman Clark, General Electric Company.
Secretary—Mr. J. C. Bebb, Otis Elevator Company.
Treasurer—Mr. F. P. Byington, Johns-Mansville, Inc.

A resolution as to the aims and purposes of the Producers' Research Council was drawn up to be presented to the Board of Directors of the American Institute of Architects. (a) To carry out the terms of the affiliation plan adopted by the Board of Directors of the American Institute of Architects at its meeting in November, 1923. (b) To co-operate with the American Institute of Architects, with which the Council is affiliated. in furthering the highest ideals in architecture and building, to the end that the property owner may obtain that which is most suitable and at the proper expenditure. (c) To provide a forum for the discussion of the mutual problems of architects and the producers of building materials and products. (d) To establish, through co-operation with the American Institute of Architects, the machinery whereby the needs of the architect, in regard to materials, may be readily placed before producers, and whereby the producers may learn the best means of communicating to architects, without waste, necessary and helpful information concerning the materials and products which they manufacture. (e) To promote research in order that facts may be established relative to materials and the proper methods of using them.

The members of the Producers' Research Council as of 1 August, 1924, are:

Frank Adam Electric Company
American Face Brick Association
American Radiator Company
Anaconda Copper Mining Company
Associated Tile Manufacturers
Atlas Portland Cement Company
Bostwick Steel Lath Company
Celotex Company
Chamberlain Metal Weather Strip Company
Copper and Brass Research Association
Dahlstrom Metallic Door Company
E. I. DuPont de Nemours and Co., Inc.
Eagle Picher Company
General Electric Company
C. G. Hussey and Company
International Casement Co., Inc.
Jenkins Brothers Company
Johns-Mansville, Inc.
Knapp Brothers
Long-Bell Lumber Company
McCray Refrigerator Company
Monarch Metal Products Company
Murphy Varnish Company
National Lead Company
National Terra Cotta Society
Otis Elevator Company
The Peelle Company
W. M. Ritter Lumber Company.
Southern Pine Association
Spencer Turbine Company
Stanley Works
The Truscon Laboratories
W. S. Tyler Company
United Metal Products Company

The Allied Architects' Association of Los Angeles—II

A New Method of Developing Architectural Design

THREE years have tested the principles and performance of the Allied Architects Association of Los Angeles. Since its foundation in 1921, sufficient professional work has been accomplished to make its methods and procedure a profitable study. The consistent increase in its field of endeavor, the loyalty of its members and the broadening of its interest in Educational and Development work go to prove that the wisdom and effort of its Founders are justified.

Of all its activities, its method of developing Architectural Design is of first interest to the profession. That seventy architects of strong personality and marked accomplishments can compound seventy ele-

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mental suggestions into one final solution may seem like magic. Since it has been done, it will be interesting to study how it has been done.

First we must bear in mind that the work of the Association is handled by two distinct forces of men working along two parallel lines. The Membership of the Association and its paid employees function as differently as the fighting troops and the Entendent of an army, but all toward one objective. The Members, under the leadership of the Board of Directors, initiate and create the design; while a competent working force is close behind putting thoughts into writing, ideas into sketch form and sketches into precised drawings.

To date, the Architectural Services of the Association have been limited to County and City buildings and improvements. Preliminary negotiations are carried on by the Executive Officer, assisted and authorized by the Board of Directors, resulting in Contracts between the Municipal Authorities and the Association drawn up in standardized form, which is changed in detail to meet special requirements. During the preliminary consideration, the conditions of site, area, height and special requirements for the building are defined. In case of any unusual contingency of real estate, topography, or layout, a special committee of Members is appointed to confer and advise on these subjects.

Upon the execution of the Association's Contract with the Municipal Authorities, a program is prepared by the Executive Office and sent to each member explaining about the new project, and requesting them to submit their ideas to sketch form. The conditions surrounding this problem are explained with information as to lot and area requirements and all conditions which may be defined. This program may include diagramatical plans and sometimes cross-sections, but the greatest possible latitude is given. Members are not restricted to any medium or style of rendering or presentation, and the Executive Office supplies material and the facilities of the drafting room for the convenience of those who desire it.

On the day set for the receipt of sketches, a Members' Meeting is called which invariably has been well attended. On the wall of a big meeting room the sketch contributions are hung for the inspection of all. There is the usual informal discussion and dinner before the meeting is called to order. Then each member is called upon to give his criticism of each and all of the ideas submitted. By simple methods of grouping and classifying these esquisses, the sense of the meeting is developed. Strange to say, a very definite tendency is shown toward a certain sketch or class of sketches. If there is any noticeable variance in the minds of those present, a system of balloting is used to bring out the consensus of opinion. All criticisms are given freely and honestly and are invariably received in good spirit. Hearty and spirited argument is encouraged. During these discussions, it must be that every one absorbs an invaluable education from observations of the different Architects. The "open Forum" is one of the fundamentals of "the Allied," productive of new ideas and cultivating old ones.

The next step in the plan is the selection of a Jury of Design. The personnel is elected by the Board of Directors and the selection is made with proper consideration given to the result of this competition, the talents of each as adapted to the design under consideration and the relationship of personalities of those who constitute this Jury. At the present time there are four Juries of Design, a Jury of Specifications, a Jury of Engineering and a Committee on Survey; thus the Membership in rotation is given opportunity to take part in the various phases of architectural service.

Entrusted with the responsibility of developing the design, the Jury meets one or more afternoons each week in the drafting rooms of the Association. There is always a recorder on hand, the Production Manager and the other personnel as required. At various stages in its progress, the work may be presented to the Board of Directors for criticism or advice. There is no set rule as to referring the design to the Board in intermediate stages, but, as one naturally would suppose, such action is taken either when the Jury has arrived at some successful period of development or when it is "stumped." The representatives of the County or City are called in for consultation as conditions require. Public Officials report that their visits to the drafting room have proved to be exceedingly instructive and the meetings of the Association have been an inspiration. When the Jury has finally "arrived," the design is presented to the Association and then to the County or City for approval.

Of course, psychology must play its part in maintaining enthusiasm and progress. This calls for confidence in the ideals of the Association on the part of its leaders, and in the Members a firm belief in its possibilities and attainments. The Executive Office and the Production Department do all in their power and within the limits of the By-Laws to serve individual needs of each Member. In an amount as great as the budget of the Association will allow, Members are compensated for the preparation of sketches and for service on committees. This remuneration is such as to be attractive to the younger Architects and to be some recognition of the services of the older Architects. Above all, each Member realizes that he is part of an Organization pledged to the betterment of Art and Architecture, and each one feels the natural instinct of Mankind to unite in working for a common cause.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

U. S. Govt. Specification for Fire-Extinguishing Liquid. Carbon Tetrachloride Base (29e3) (*Federal Specifications Board. Standard Specification No.* 36.) The liquid shall be capable of extinguishing fires caused by the burning of inflammable liquids and solids, shall be a nonconductor of electricity, and shall consist of carbon tetrachloride containing other suitable products necessary to produce a liquid conforming to the following requirements when tested according to the methods herein stated:

Appearance.—It shall be a clear, homogeneous, mobile liquid.

Specific Gravity.—The specific gravity at 15.5/15.5 degrees C. shall not be less than 1.500.

Cold Test.—The liquid must have a cold test not higher than minus 45.5 degrees C. (minus 50 degrees F.).

Distillation.—Not over 2 per cent shall distil below 60 degrees C. At least 90 per cent shall distil between 70 and 80 degrees C. At least 99 per cent shall distil below 100 degrees C.

Impurities.—The liquid shall be free from nitrobenzene, water, acid or alkali, and free halogens, and shall not contain more than 1 per cent by weight of carbon disuphide. It shall not corrode metals used in fire extinguishers.

This circular also contains specifications for Sampling and Methods of Testing.

The fumes generated in extinguishing fire with this liquid are intensely irritating and are also poisonous, and it is unsafe for use in confined spaces. On account of the rapid generation of such fumes, a fire cannot be fought for any considerable length of time. However, this material is the only suitable liquid known, which is a nonconductor of electricity, for use in hand-fire extinguishers in fighting incipient fires in connection with electrical apparatus. Care should be exercised in its use.

Range Boilers and Expansion Tanks (29d2). (*Simplified Practice Recommendation No.* 8. *Issued by the Bureau of Standards.*) In accordance with the unanimous action of the joint conference of representatives of manufacturers, distributors, and users of range boilers and expansion tanks, the United States Department of Commerce, through the Bureau of Standards, recommends that the recognized sizes and capacities of range boilers and expansion tanks be reduced to those shown in the following tables:

TABLE I.—RANGE BOILERS

Sizes (inches) Diameter (1)	Length (2)	Capacities (gallons)	Sizes (inches) Diameter	Length	Capacities (gallons)
12	36	18	18	60	66
12	48	24	20	60	82
12	60	30	22	60	100
14	48	32	24	60	120
14	60	40	24	72	144
16	48	42	24	96	192
16	60	52			

(1) Diameters refer to inside measurements.

(2) Lengths mean lengths of sheet, not over-all lengths of boilers.

NOTE.—Range boilers may be made in two classes—"Standard" 85 pounds working pressure and "Extra heavy" 150 pounds working pressure.

It is further recommended that—

I. Range boilers have one side tapping 6 inches from the top and one 6 inches up from the bottom (measurements to be made from the edge of the shell plate), and two tappings in the top and one in the bottom. All tappings to be 1 inch; ½ inch top and the ¾ inch side and bottom tappings on vertical boilers to be eliminated.

II. The "short size" boiler (that is, 12 by 58 inches) now used in New York, N. Y., be eliminated.

III. Five 1-inch openings be considered as standard for horizontal boilers.

IV. The 16 by 48 inch boiler be advertised as of its actual capacity (viz., 42 gallons), in lieu of No. 18 to avoid confusion with present 18-gallon boiler.

V. All range boilers and combination boiler and gas water heaters be rated by their actual water capacities in gallons.

TABLE II.—EXPANSION TANKS

Sizes (inches) Diameter	Length	Capacities (gallons)	Sizes (inches) Diameter	Length	Capacities (gallons)
12	20	10	16	30	26
12	30	15	16	36	32
14	30	20	16	48	42

NOTE.—Gauge glass tappings to be 13½ inches between centers to provide for vertical exposure of 12 clear inches of gauge glass.

Surfacing Materials for Bitumnious Built-up Roofing (12a1). (*Circular of the Bureau of Standards, No.* 158. *Federal Specifications Board Specification No.* 82.)

General. These specifications apply to surfacing materials intended for surfacing built up bituminous roofing and may be used interchangeably, but must be applied in the manner described in the specification for application of the particular surfacing material. Surfacing material shall consist of either roofing gravel, slag, crushed hard stone, promenade tile, or slate slabs.

(a) *Roofing Gravel.*—Roofing gravel shall be hard, durable, waterworn, dry and free from clay, loam, sand, and other foreign substances. It shall be preferably within the following limits with respect to size:

Passing a three-fourths-inch sieve.....100 per cent
Passing a five-eighths-inch sieve and retained on a one-fourth-inch sieve, not less than..... 80 per cent
Retained on a one-eighth-inch sieve.....100 per cent

(b) *Roofing Slag.*—Roofing slag shall be crushed hard blast-furnace slag, dry, and free from sand, dirt, clay, or other foreign substances. It shall be preferably within the following limits with respect to size:

Passing a three-fourths-inch sieve.....100 per cent
Passing a five-eighths-inch sieve and retained on a one-fourth-inch sieve, not less than..... 80 per cent
Retained on a one-eighth-inch sieve.....100 per cent

(c) *Crushed Stone.*—Crushed stone for roofing shall be hard, durable rock other than limestone which will crush to particles of a fairly cubical shape instead of long, thin, flat splinters. It shall be dry, free from sand, dirt, clay or

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other foreign substances and shall be preferably within the following limits with respect to size:

Passing a three-fourths-inch sieve.....100 per cent

Passing a five-eighths-inch sieve and retained on a one-fourth-inch sieve, not less than..... 80 per cent

Retained on a one-eighth-inch sieve.....100 per cent

(d) *Promenade Tile.*—Promenade tile shall be first quality vitrified shale tile, square edged, sound, unwarped, and free from blisters, chipped edges, or other surface defects. The tile shall be grooved on the back, so as to afford an ample bond, and of the size and color specified in the contract. No dimension shall be more than 2 per cent above or below the size specified.

(e) *Slate.*—Slate shall be of the quality, width, length, and color specified for the particular job. It shall be clear and shall have a minimum thickness of three-sixteenths inch with sides cut true. The circular also contains specifications for Sampling and Laboratory Examination.

Hollow Building Tile (10a1). (*U. S. Department of Commerce. Simplified Practice Recommendations No.* 12. *Sizes* 6″ *x* 9″. *Pages* 6.) In accordance with the unanimous action of the joint conference of representatives of manufacturers, distributors, and users, the United States Department of Commerce, through the Bureau of Standards, recommends that the number of sizes of hollow building tile be reduced to the following:

STANDARD LOAD-BEARING WALL TILE

	No. of cells	*Weight, each Pounds*
End construction:		
3¾ by 12 by 12	3	20
6 by 12 by 12	6	30
8 by 12 by 12	6	36
10 by 12 by 12	6	42
12 by 12 by 12	6	48
Side construction:		
3¾ by 5 by 12	1	9
8 by 5 by 12	2	16
8 by 5 by 12 ("L" shaped)	—	16
8 by 6¼ by 12 ("T" shaped)	4	16
8 by 7¾ by 12 (square)	6	24
8 by 10¼ by 12 ("H" shaped)	7	32

STANDARD PARTITION TILE

3 by 12 by 12	3	15
4 by 12 by 12	3	16
6 by 12 by 12	3	22
8 by 12 by 12	4	30
10 by 12 by 12	4	36
12 by 12 by 12	4	40

STANDARD SPLIT FURRING TILE

2 by 12 by 12	—	9

STANDARD BOOK TILE

		Pound per square foot
3 by 12 by 18 to 24	—	18

Not more than 5 per cent tolerance over or under allowable for weights and 3 per cent over or under for dimensions covering length, width, and height.

U. S. Government Master Specifications for Asphalt for Mineral-Surfaced Roofing (12a12). (*Bureau of Standards Circular No.* 159. *Federal Specifications Board No.* 84.)

General. This specification applies to asphalt intended for use with Asphalt-Saturated Rag Felt for Roofing and Waterproofing (F. S. B. Spec. No. 86) in the construction of mineral-surfaced built-up roofing on inclines not exceeding 3 inches to the foot. Either petroleum asphalt or mixtures of refined Trinidad asphalt with petroleum asphalt or asphalt fluxing materials will be acceptable under these specifications, but contract must state kind to be furnished.

When tested by the methods contained in this specification, this asphalt shall conform to the following requirements:

(a) *Appearance.*—Freshly melted material shall be uniformly glossy, and on aging one week its surface shall not become dull or show any separation of oil, grease, paraffin scale, or similar material.

(b) *Melting Point.*—140 to 165 degrees F.

(c) *Penetration at* 77 *degrees F.*—25 to 50.

(d) *Penetration at* 32 *degrees F.*—Minimum, 10.

(e) *Ductility at* 77 *degrees F.*—Minimum, 5 cm. Other considerations being equal, preference will be given to asphalt having a minimum ductility at 77 degrees F. of 20 cm.

(f) *Volatile Matter at* 325 *degrees F.*—Maximum, 1.5 per cent.

(g) *Decrease in Penetration at* 77 *Degrees F. After Heating.*—Maximum, 40 per cent.

(h) (1) *Soluble in Carbon Bisulphide* (in the case of petroleum asphalt only) minimum, 99 per cent.

(2) *Ash* (in the case of mixtures of refined Trinidad asphalt with petroleum asphalt or asphaltic fluxing materials), minimum 20 per cent. The ash shall have the characteristics of the ash from refined Trinidad asphalt.

(i) *Packing.*—This asphalt shall be put in steel drums or other suitable containers and be delivered at the site of the job in original sealed packages as put up by the manufacturers. They shall be marked with the manufacturer's name and brand. This circular also contains specifications for Sampling and Laboratory Examination.

U. S. Government Master Specifications for Asphalt Primer for Roofing and Waterproofing (12a12). (*Circular of the Bureau of Standards No.* 162. *Federal Specifications Board Specifications No.* 87.)

General. This specification applies to asphalt primer intended for use, when specified, as a priming coat for concrete, gypsum, and other masonry surfaces over which asphalt built-up roofing, waterproofing, or damp proofing are to be applied. It shall consist of an asphaltic base thinned to suitable brushing consistency with a volatile solvent, and when tested by the methods contained in this specification shall meet the following requirements:

(a) The asphaltic base shall not be less than 35 per cent by weight.

(b) The asphaltic base separated as under 3 (b)[1] shall have the following characteristics:

(1) *Melting Point.*—131 to 170 degrees F.

(2) *Penetration,* 15 to 50.

(c) The solvent used shall be a hydrocarbon distillate having an end point on distillation not exceeding 500 degrees F., of which not more than 20 per cent shall distill under 248 degrees F. The solvent shall be completely removed by the method given under 3(b).[1] This circular also contains specifications for Sampling and Laboratory Examinations.

[1] 3-b. Separation of Asphaltic Base for Examination. One hundred g. of the primer shall be distilled with steam at a temperature of 130 to 140 degrees C. (266 to 284 degrees F.) and the distillate collected in a separatory funnel. The distillation shall be stopped when 400 cc. of water has distilled over. The residue from the distillation shall be dried to 105 to 110 degrees C. (221 to 230 degrees F.) for five hours, and then gradually heated until all the moisture is expelled, but the temperature must not exceed 150 degrees C. (300 degrees F.)

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The Work of Josef Hoffmann

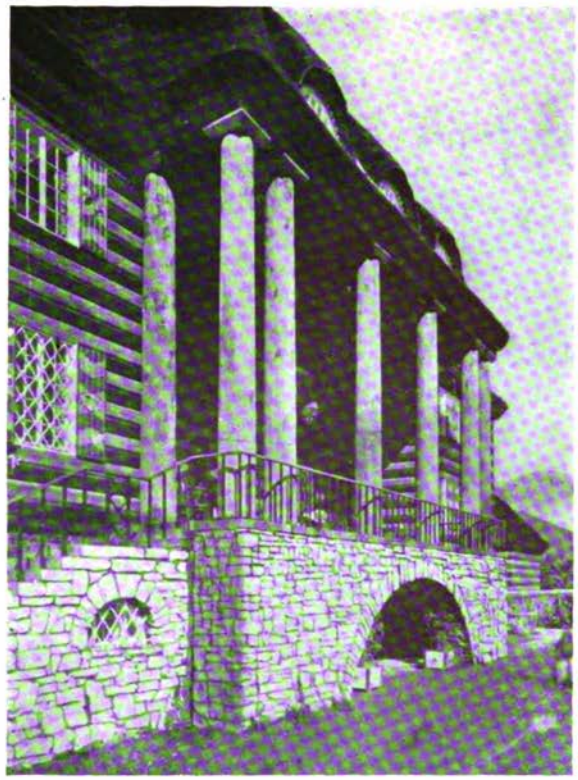
IN A letter from Vienna which appeared in *Architecture* (London), for July, 1923, and in which I discussed certain aspects of modern Austrian architecture, I briefly referred to the work of Josef Hoffmann. Since, however, this artist ranks as one of the strongest personalities not only among our Austrian architects but among the whole of our generation, it may be worth while to consider his characteristics in a separate article.

Examples of Hoffmann's art are to be found in many countries besides Austria, but a closer understanding of his art can only be gained by considering it at its source—that is, Vienna—where his creative power originated and developed. Hoffmann is not, indeed, a native of Vienna (he was born in Moravia), but he came to the Austrian capital at a very early age and studied under Hasenauer and Otto Wagner. In the letter referred to above, I have also discussed the influence of Wagner and of his school of design, pointing out that Hoffmann soon struck out new paths for himself. These must form the subject of the present article.

In his twentieth year he left the Academy and joined a group of young artists which included the architect Olbrich, the craftsman Kolo Moser, the painters Klimt, Andri and others—the very group which shortly afterwards founded the Viennese Secession. One must recall this period at the close of the nineties in order to picture what a *ver sacrum*—which was also the name of the periodical founded by this group—had burst into blossom all over the country. To-day, of course, looking back on the Secession style which came into fashion at that time, we rejoice that that period, full of storm and stress—a period of seeking rather than finding—is past. That period, however, saw the foundation by Hoffmann of the *Viennese Workshops*. Though the *Viennese Workshops*, of which Hoffmann is the founder and designer in chief and the present director, is a manufacturing company for the applied arts, it is nevertheless necessary, in a consideration of Hoffmann's architectural activities, to realize the close connection between his great architecture and the easy and harmonious charm of a well-ordered life in beautiful surroundings. Hoffmann's whole craftsmanship springs from the idea of its application to architecture; it is closely connected with it; it is demanded by it, as it were; and in the process of creation the very first design for a house —whatever its description—pictures it furnished in every detail, provided with all the requisite appointments, thrilled with all the devices of the craftsman's fancy. Nay, more than this—the author imagines it animated with the social life which represents the meaning and the purpose of the house. And it is precisely this poetic gift which raises him above the status of a master builder of the highest technical efficiency to that of an artist in the deepest sense of the term.

Hoffmann came to Vienna at an early age. From childhood he had been imbued with the Austrian spirit; it was therefore inevitable that he, a sensitive artist who so well understood and so deeply loved this throbbing national life, should readily absorb the Viennese tradition. Tradition not in the sense of the Epigoni, but of the Viennese, as it had been evolved in the course of a century in the city of Haydn, Mozart, Beethoven, Schubert, Brahms and Mahler. The musical genius of this city, who continues singing through every disaster which befalls her, is another influence which permeates Hoffmann's buildings. I am anxious that the buildings here illustrated should be considered from the right point of view: that the "different" element in them shall not mislead anyone into thinking that it is due to affectation or to a desire deliberately to create something unusual. I know what sincere appreciation Hoffmann has for the distinctive character of English dwellings, for the fireplace, for the cosy corner, for the special treatment of the servants' quarters, and other such like things. His

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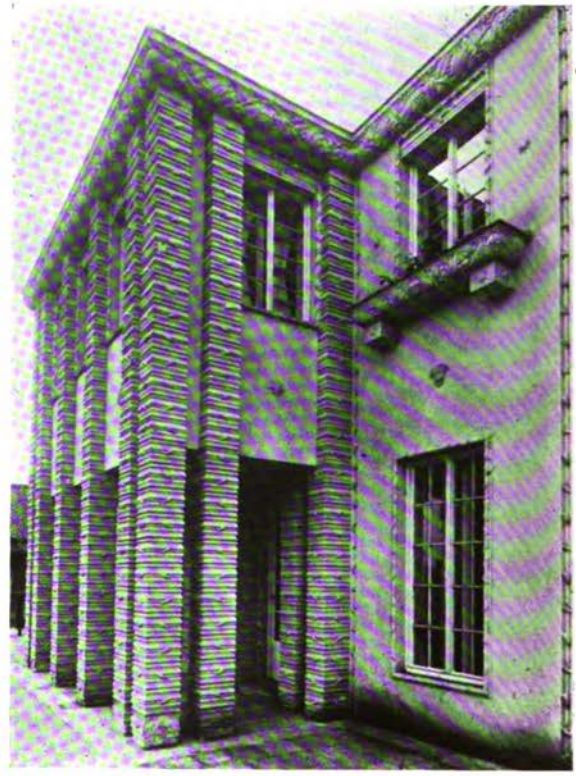


PRIMAVESI—WINKELSDORF, NORTH MORAVIA
JOSEF HOFFMANN, *Architect*

cosmopolitan conception of the mode of life of people of universal culture is amply demonstrated by the fact that his work is not confined to Austria, for buildings by him are found in Berlin, East Prussia, Croatia, Bohemia and Belgium. In fact, the palace which he built in Brussels for M. Stoclet gives an admirable idea of the manner in which Hoffmann knows how to guide a client who exhibits an intelligent interest in art and whose demands are somewhat extensive and complicated. This house is not only a dignified mansion, but at the same time a repository of choicest works of art. A gallery it certainly is only as regards the value of the art treasures which it contains; in all other respects it is furnished for ample hospitality and comfortable living. The palace was constructed of the noblest materials. The whole of the exterior is faced with Norwegian white marble, which is enclosed at the edges by a copper border with ornamental gilding. In the interior, too, the walls of the reception rooms, with the exception of the library and the ladies' drawingroom, are faced with marble, often of the costliest Italian kinds. For the floors rich parquets are frequently used. To take only one example, the great hall, in the rich, yet logical treatment of its material, with the artistic furniture designed by Josef Hoffmann, and Monsieur Stoclet's magnificent art treasures, produces the effect of an antique shrine or private chapel. Among these exhibits are old Chinese, Japanese and Persian pictures, primitive works of art from Siena, Florence and the Netherlands, Chinese bronzes, and also examples of modern art, such as pottery by Georges Minne and others. On my visit there I received my strongest impression of the house from this hall, and had a feeling as though one must not speak too loudly within its walls. Here, notwithstanding the diversity of their origin, a thousand lines, forms and colors were combined to form a uniform whole.

A more typical building perhaps was the Austrian house at the exhibition of the Werkbund, in Cologne, 1914, which will be remembered by many continental travellers. In this case, too, it was by Hoffmann's skillful treatment that the extreme diversity offered by the very great number of exhibits was merged into uniformity; and externally, with the simple building materials which alone are permissible for an exhibition hall, he yet succeeded in producing an impression of sober and permanent strength.

The villas at Hohe Warte, a suburb of Vienna, were built a long time ago and have become quite well known through numerous publications. A considerable number of these have been erected, but I do not propose to deal with them in this article. The country house Primavesi, at Winkelsdorf in North Mora-



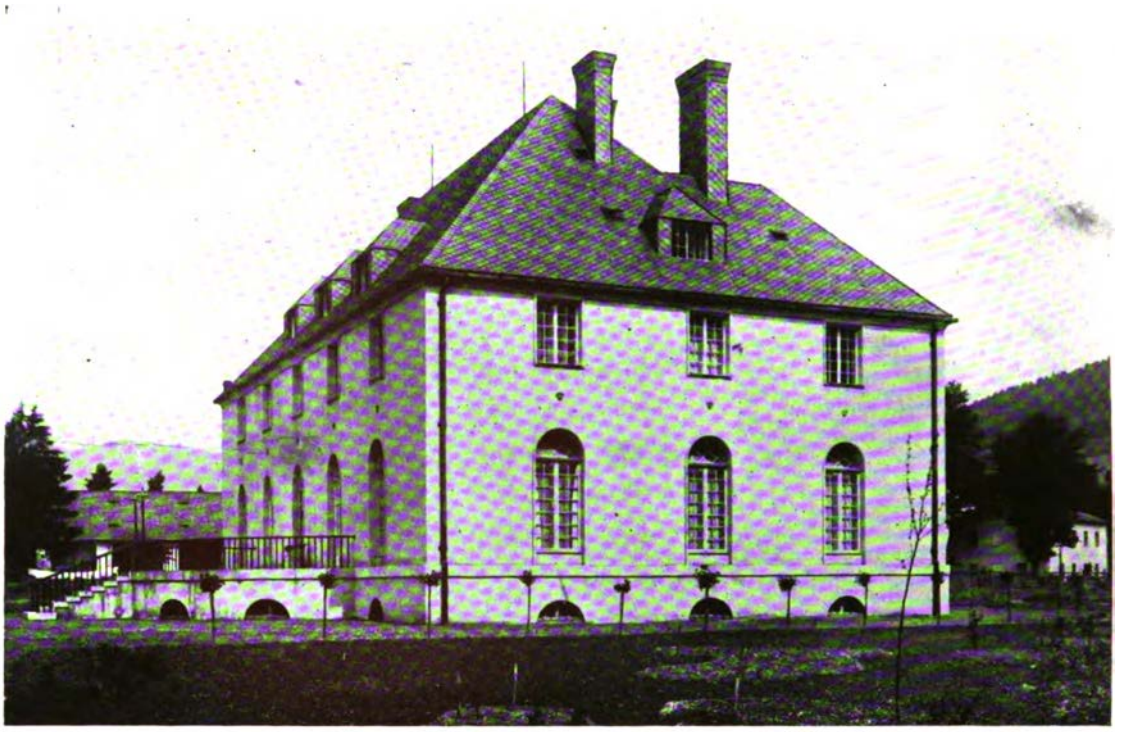
HOUSE FOR SISGMUND BERL,
FREUDENTHAL, CZECHO-SLOVAKIA
JOSEF HOFFMANN, *Architect*

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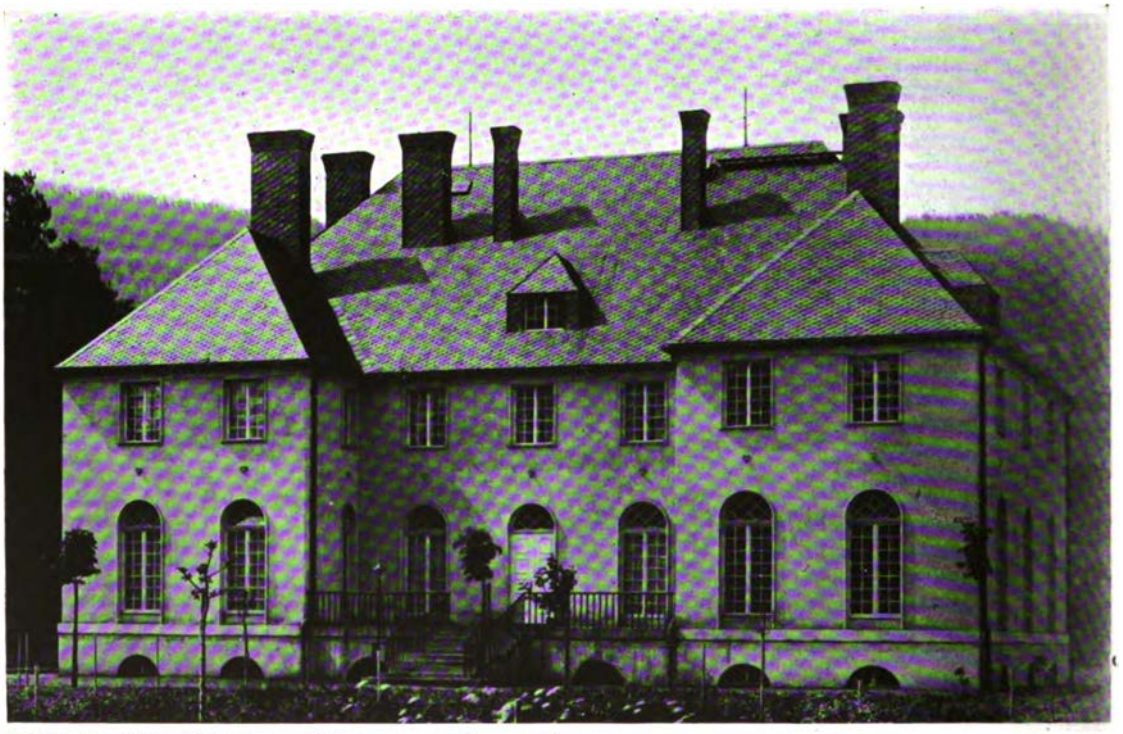


THE AUSTRIAN HOUSE, WERKBUND EXPOSITION
COLOGNE—1914
JOSEF HOFFMANN, *Architect*

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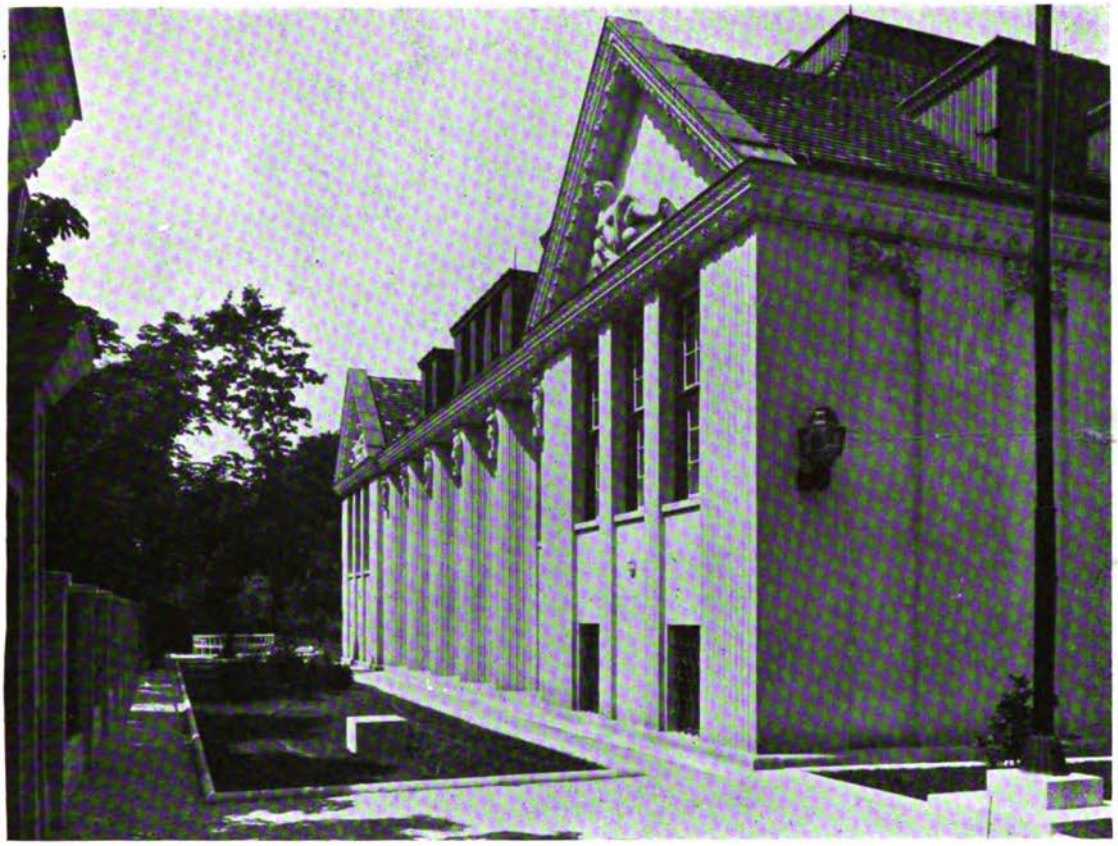


HOUSE FOR HERR GROHMANN—WÜRBENTHAL, CZECHO-SLOVAKIA
JOSEF HOFFMANN, *Architect*

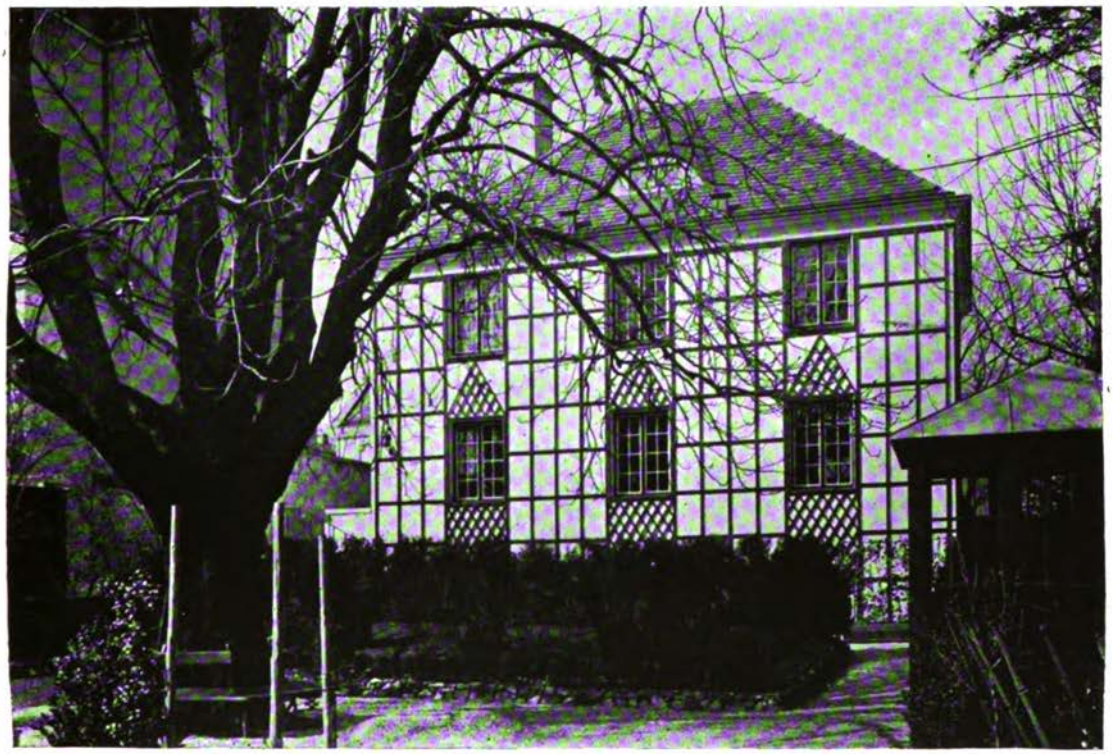


HOUSE FOR HERR GROHMANN—WÜRBENTHAL, CZECHO-SLOVAKIA
JOSEF HOFFMANN, *Architect*

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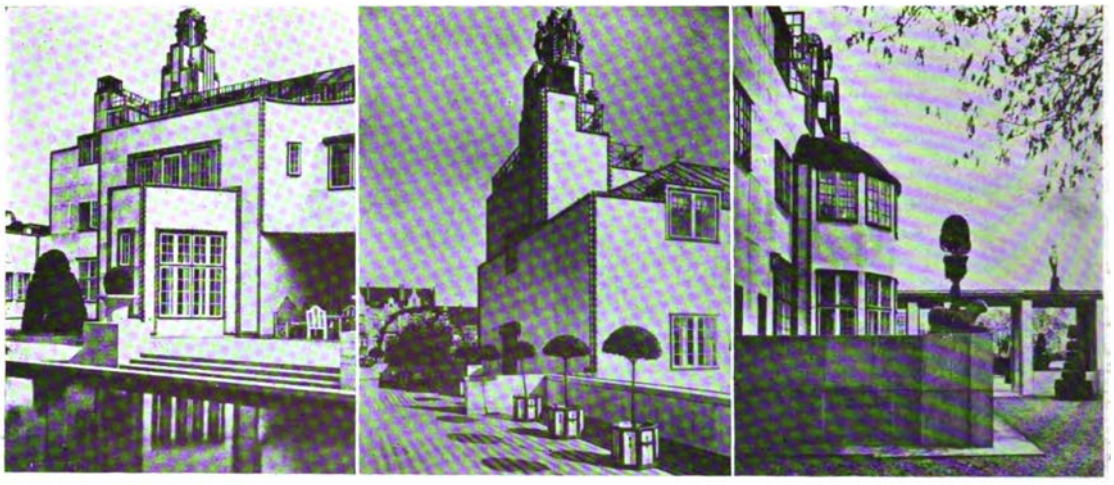


HOUSE—HIETZING, NEAR VIENNA
JOSEF HOFFMANN, *Architect*



HOUSE FOR HERR THYRVA—VIENNA
JOSEF HOFFMANN, *Architect*

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PALAIS STOCLET, BRUSSELS
JOSEF HOFFMANN, *Architect*

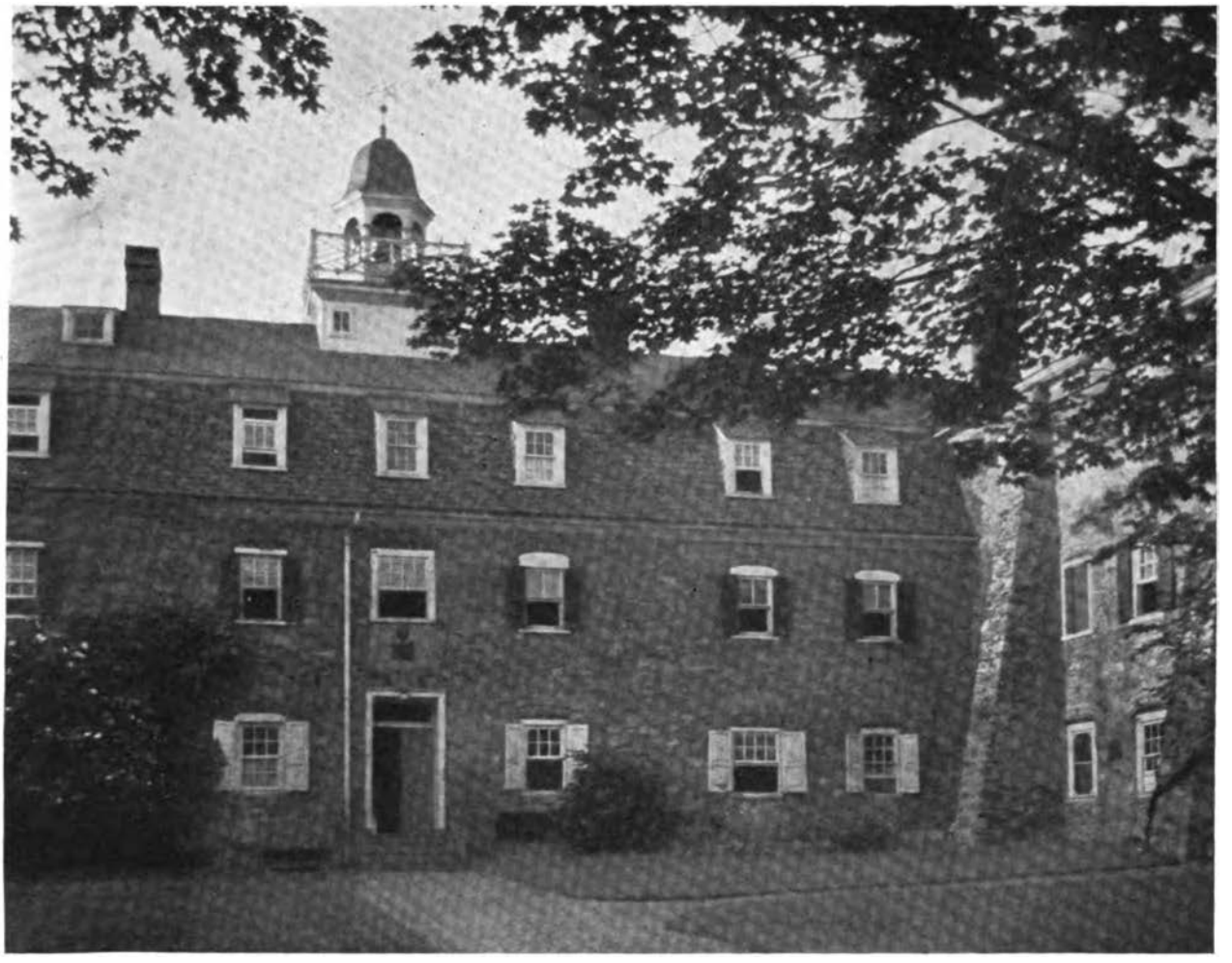
via, is less known. This house is a real summer residence, built of wood on a rustic limestone plinth and roofed with straw thatch. It should be remarked how well the character of the building is brought out by form and material. One may imagine how this house is adapted to its rural surroundings without losing any of its manorial appearance. By the use of large-patterned wallpapers and broadly designed furniture the interior is devised to harmonize equally well with the country setting, and altogether this building forms a marked contrast with a town mansion such as that in Brussels, for instance, or to the house at Hietzing, near Vienna.

I still have to mention several other structures which have recently been erected. One of these is Freudenthal Castle in Czecho-Slovakia. The walls are faced with stucco, but pillars, pilasters and window frames are richly ornamented. It is well known how easily a house becomes restless and commonplace by the use of ornament. It is, however, impossible to imagine a building more severely simple than this, despite its ornamentation. The interior walls of a beautiful white finish have the restfulness peculiar to eighteenth century houses. A house of similar quality is the Grohmann dwelling, also in Czecho-Slovakia. Here, too, we perceive how the artist is approaching ever nearer to a simplicity of form—an aim towards which he is perhaps assisted by the circumstances of our time, which everywhere inculcate economy.

In everything, even in these recent houses, we recognize that to the great architectural forms Hoffmann invariably imparts the supreme grace of an innate culture, but that the design of the interior furnishing and of the minor fittings and appliances is always based upon the complete general structure, and is regarded by him as linked up with the whole. Thus in his houses no additions are made by another hand, no bought furniture is to be found. For him a house, from the foundations to the ridge of the roof, is one work of art, to the smallest detail of which he applies himself with an intense and devoted concentration.

PETER BEHRENS.

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The Old Buildings of the Moravian Sisters, Bethlehem, Pennsylvania

Photographs by ROGER MILLEN

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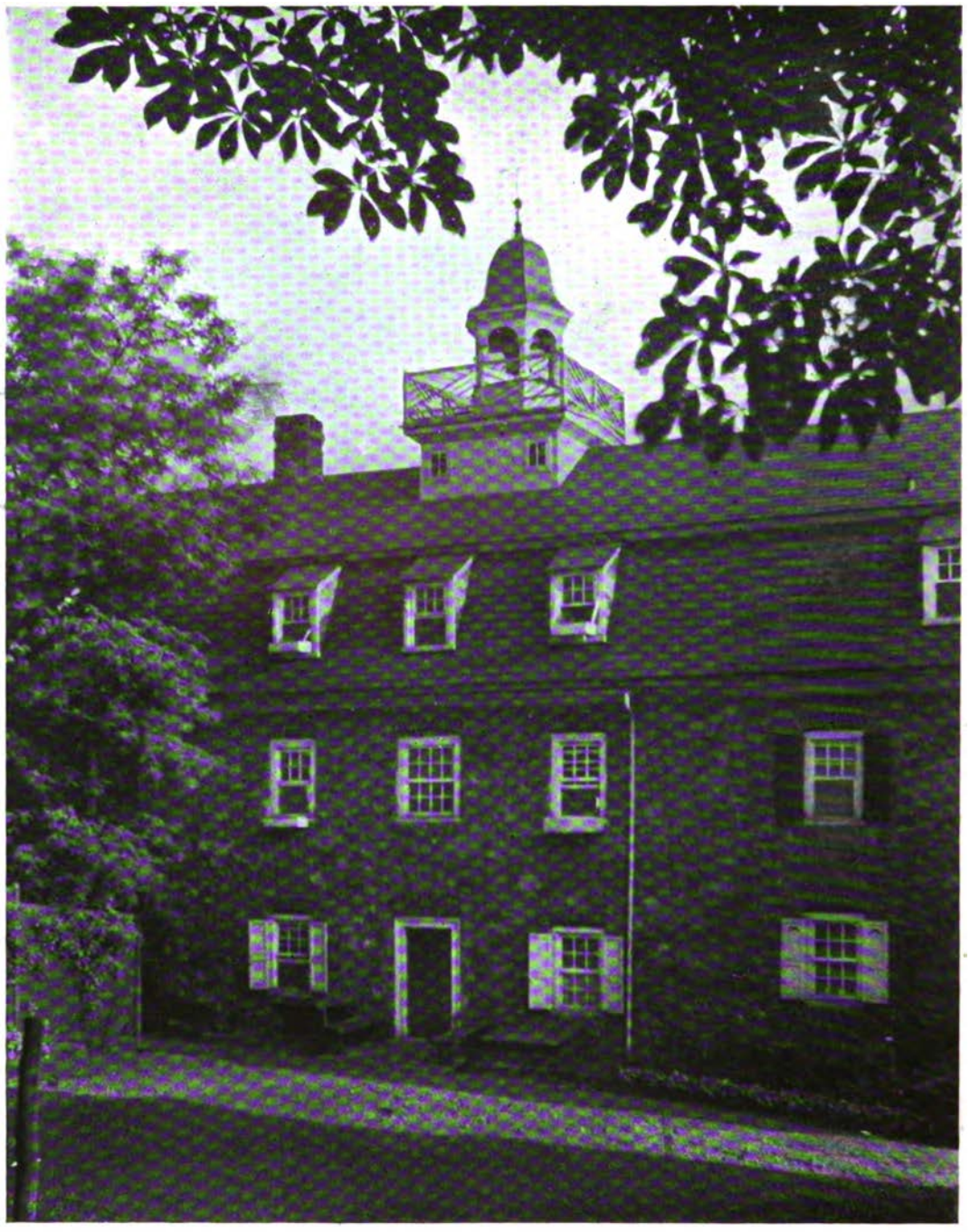
THE OLD BUILDINGS OF THE MORAVIAN SISTERS
BETHLEHEM, PENNSYLVANIA
Roger Millen

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NEAR CHAMBERSBURG, PENNSYLVANIA

Some Thoughts About Barns

Illustrations after the Woodcuts by J. J. Lankes

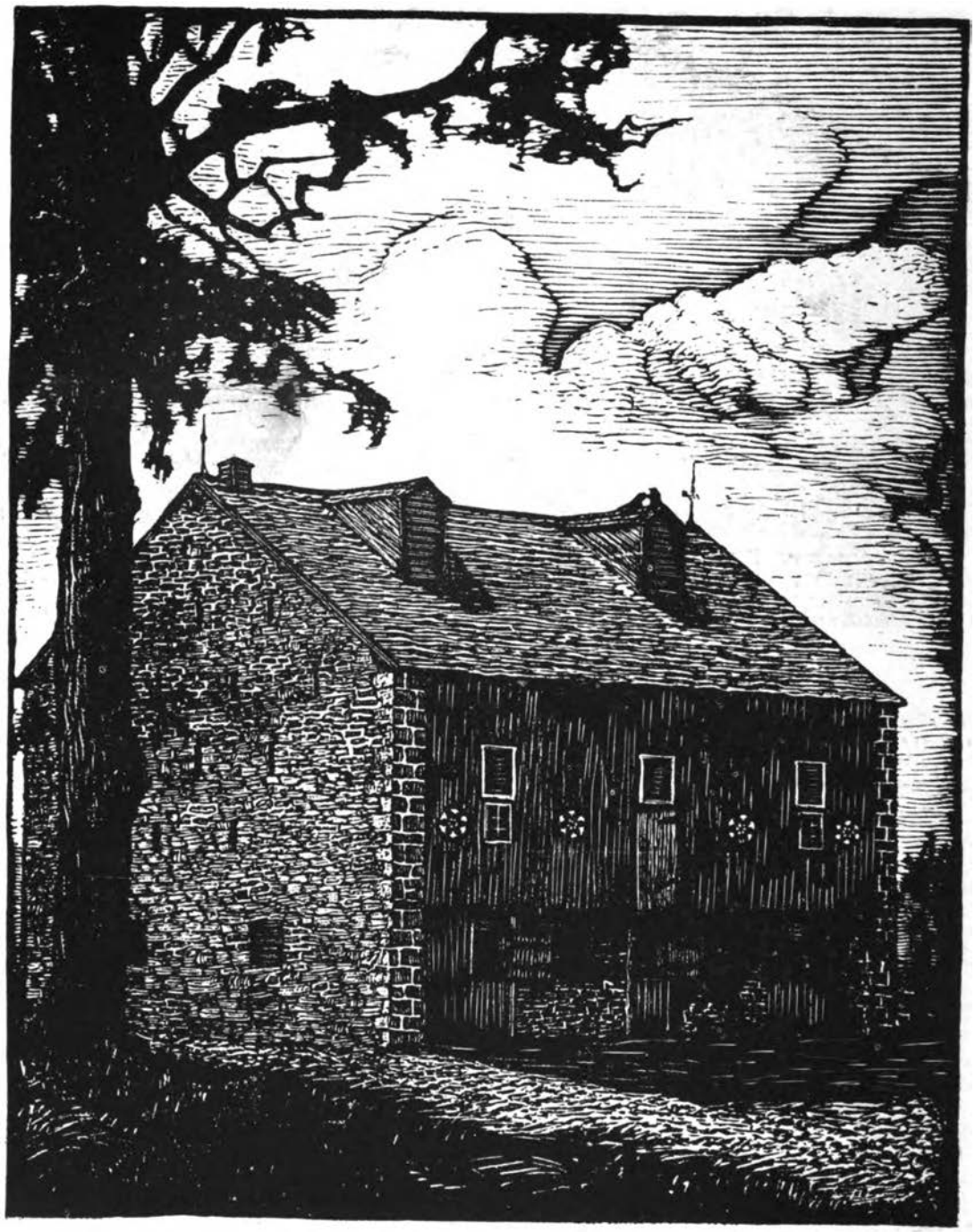
"GIVE AND preserve to our use the kindly fruits of the earth, so that in due time we may enjoy them." My memory of these words takes me back to a small stone parish church in Massachusetts, to the first heroic figure in my life (out of the pulpit, where he always seemed strange and distant in his robes of black and white), to a hemlock tree whose slender tips waved coaxingly in the breeze, to a pointed window out of which my bored and uneasy eyes looked longingly. But suddenly the phrase swept into my mind like an adventure. It had passed my ears many a Sunday gone by, for in those days The Litany was seldom omitted from the morning service, and yet on this occasion it struck, awakening the first stirrings of what later came to be a great affection for husbandry; revealing, in one of those mysterious flashes that come to children, the wonder of seed and harvest. The Litany was related, I saw, not to theological mysteries, but to simple things, such as the gathering of berries and nuts; to the stowing of hay in the barn; to the filling of root-cellars with potatoes and turnips, beets and carrots. They were the kindly fruits given, and barn and garret and cellar were the places in which they were preserved. A pleasant name was kindly fruits. The Litany began to unfold the fact that it was a marvelous piece of literature, and contained as many pleasant words as one is like to find in English prose.

Coincidently with the train of thought that there and then sped on and on, there came the picture of the barn, the old, old barn on the ancestral farm—unsceptered empire of a summer's dream—up to which the village empire was creeping with a relentlessness I did not like and the unlovely meaning of which I dimly guessed. It was a wooden barn, with no particular merit, except glorious mows for jumping and warm drink to be had at the night milking. It always seemed vast and tremendous as we faced the long row of stalls and sensed the loftiness of roof. But the last time I saw it against an evening sky, it seemed at first hardly a noticeable structure. Yet, suddenly, as I became aware of the barren two-storied houses that marked where the village had crept up to the very precincts of my hallowed demesne, the comparison between these stiff and dreary things standing up on the very land that once gave us kindly fruits enfolded the barn with a look of dignity; it took on a sedate and honorable aspect, as though it knew that no good would come out of the chimney that already had begun to darken the valley with its smoke.

But the pleasant words of The Litany never deserted me, as the years went by, and when I first stood in an old English tithe barn, where once the abbots stored the gleanings and garnerings that were paid in tithes each harvest time, I felt a melancholy that there should have been traffic in these things. (Perhaps that is why the institutions are no more.) Not a great melancholy, it is true, for the tithe barn was too wonderful to behold. All of stone, even to the roof, which was of thin slabs laid over and cunningly secured to an oaken timber frame, which, I daresay, had been renewed. But such a frame it was, and such walls, with deep splays where the thin perpendicular openings let in the cleansing winds, and the martins, and the other winged creatures that do not distinguish in matters of property.

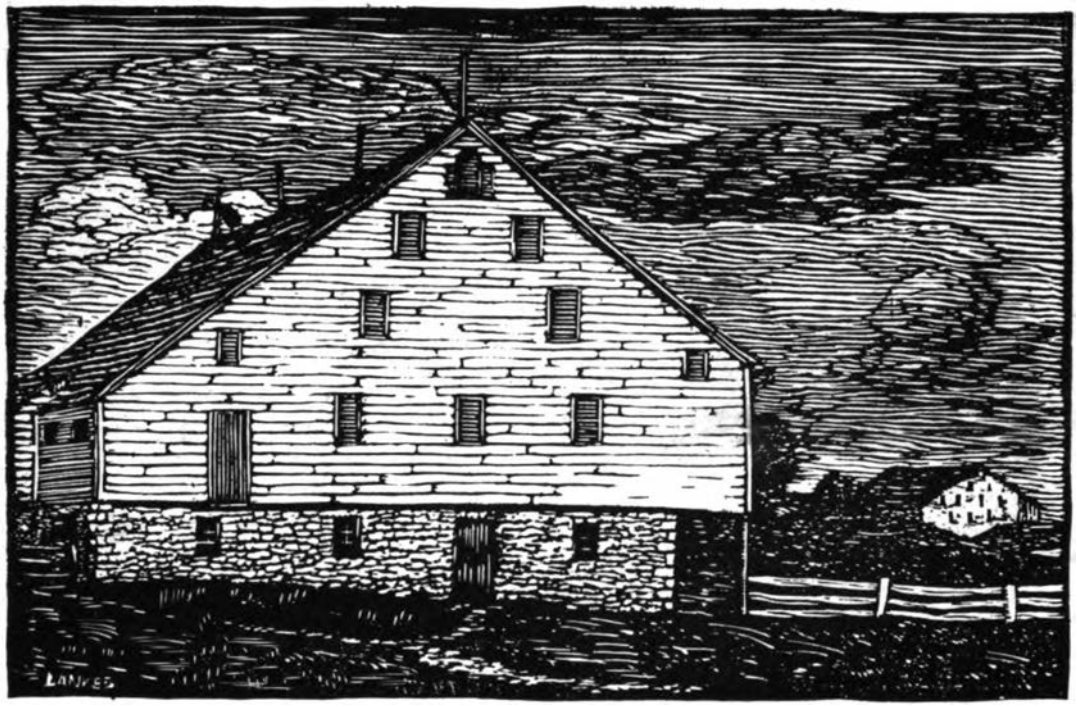
The tithe barn was as vast as a great church, vaster indeed than the little square-towered one in which I had

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NEAR LEBANON, PENNSYLVANIA

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NEAR CARLYLE, PENNSYLVANIA

first caught the meaning of kindly fruits. It seemed to stretch out like the nave of Winchester, and to soar as grandly as do certain parts of Durham. Fancy building a barn so beautiful, thought I, and yet why not? It was built to use and to last, and those primal considerations are twins that beauty likes to mate with. Hundreds of years it had stood, and still it was in active service, although the tithes have long ago been transformed to something of which money is the symbol. The kindly fruits are still stored within its capacious walls, nevertheless, and are like to be this many a year. Its builders were the men of the old Abbeys—Glastonbury, Pershore, Tewksbury, and many another of which but the merest traces remain.

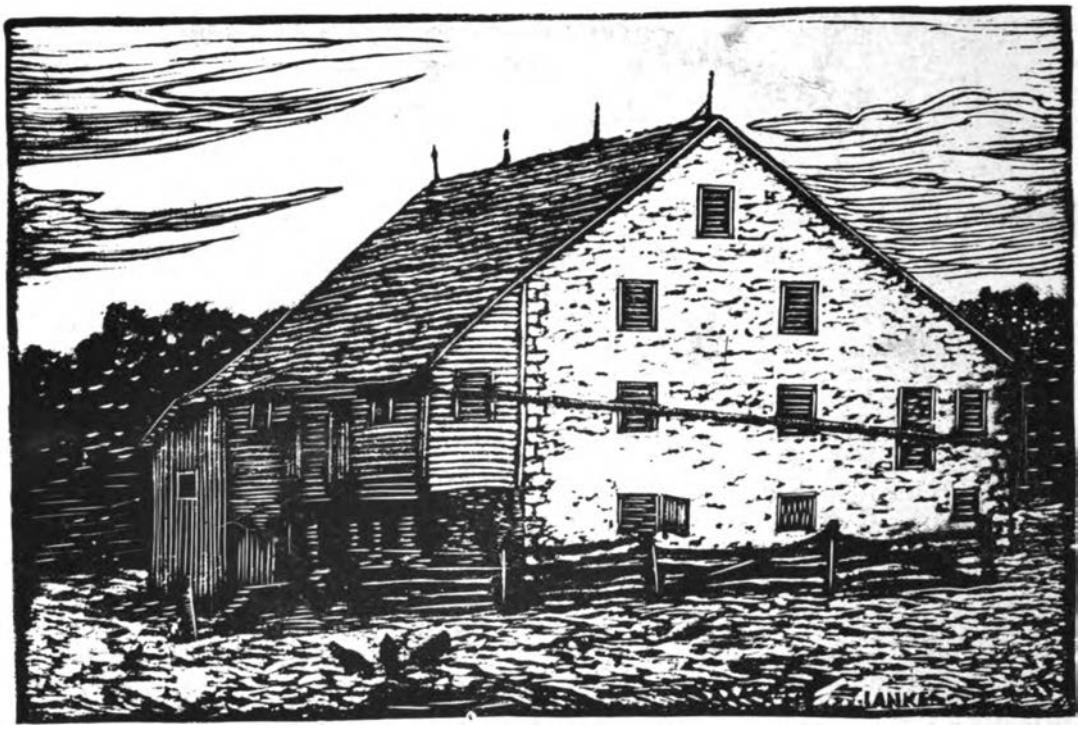
Sometime before this, as a youth, I had begun to know the paintings of Old Crome, and of Constable and the Lucas mezzotints. Then there was Gainsborough's *Hay Wain* and *Market Cart,* and best of all, the etchings of Samuel Palmer. All of these sang sweetly, nobly, grandly, the song of the kindly fruits. It was all English, to be sure, but what other race has sung the song any better in literature or in painting? Palmer's *Early Ploughman* will be remembered to the very end, the vale shadowy dark before dawn, the velvety trees against the sky, the ploughman and his oxen, the promise of day and of harvest. I have often wondered whether such works are quite understood unless one has heard and remembered that phrase from The Litany.

And yet, in none of these pictorial things are there barns to be found. Until I saw the tithe barn on the edge of Worcestershire, I had believed that the barn was an American institution. Otherwhere I saw none. Cow-sheds, wagon-sheds, and the great centralized French and Belgian farmsteads, but nothing like the American barn, in which both animals and their fodder are kept together. I suppose that in countries where there are deep snows and bitter cold, there must be barns, but certainly no country has institutionalized this type of structure as have we in the United States.

Now of all barns of which I know, there are none to compare with those in the Eastern section of Pennsylvania. I came to know them slightly many years ago, and of late a little more intimately. They are grand structures, and if the variation in type is not extraordinary, it is because the application of one governing principle is hardly ever departed from. Briefly, the barn must allow the hay to be driven in on the floor above the level at the rear. Then, with a simple overhang where the cattle are quartered, the manure is easily dropped into the yard ready for the next year's spring. No engineer could improve upon this simple manner of doing things. Hay at the top, milk below, and manure at the bottom. I have seen this principle applied in New England barns, but not often. Hardly ever is it missing in the barns of Eastern Pennsylvania and Northern Maryland. But the barns in the former locality rank higher in their architecture. If our modern industrial structures mark one of the greatest of our architectural contributions, then so do these stone and brick barns to which I refer establish the precedent. A barn is an industrial structure. It has to be contrived for a purpose. It stands or falls in merit as it serves that purpose, and surely the barn builders in Eastern Pennsylvania were masters.

Sometimes the barns are all of stone, save the roof. High gabled ends, low front and back walls, the gables

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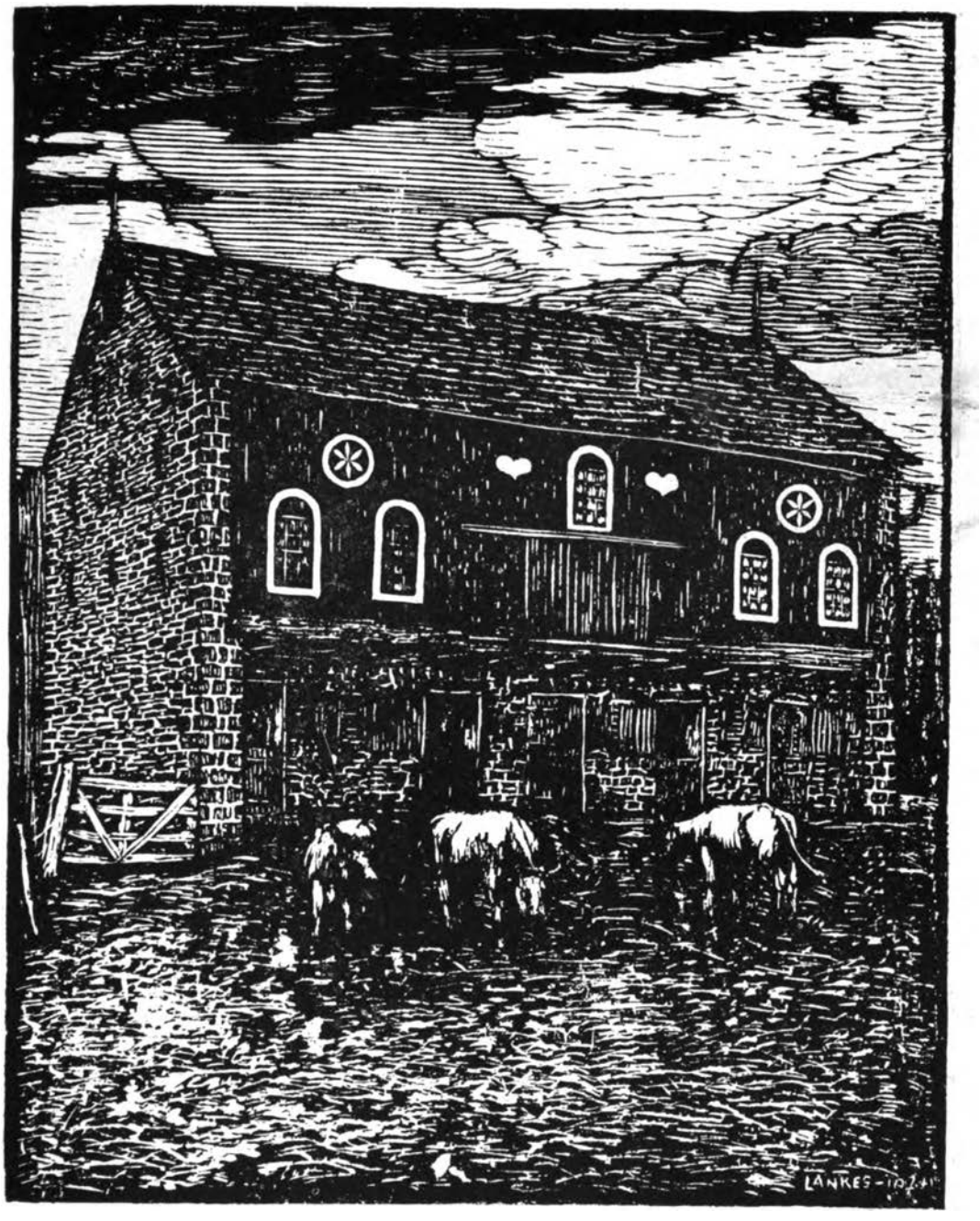
NEAR CARLYLE, PENNSYLVANIA

pierced with diamond shaped openings, in which the cunning of bricklaying works out patterns that give a note of joy to the whole structure. Sometimes only the ends are of stone; sometimes the walls are all of stone, with wooden gables. Or the same thing may be the case where brick is used. Where the barns have wooden front and back walls, or wooden gables, they may be ornamented with sunbursts in yellow, or with other curious designs, said to be symbolic and also said not to be. Into the archæology of barns I have not yet ventured far, for archæology always had a chilly feeling for me, but some day I may be persuaded to find out just what those curious decorations mean. I could be satisfied to believe that they merely reflected the need for a pattern to take the place of the oval, round, or diamond openings that are found almost always in the stone or brick barns, and I am satisfied to believe that the names often cut in the gable that faces the road or the yard were those of the bride and groom newly come to their steading.

But if the outside of these structures is impressive in its simple and finely proportioned mass, its restraint in the use of anything savoring of ornament—except the patterned air openings—its solid and substantial manner of cleaving to the landscape as though it belonged, then what is to be said for the interior? Such framing is hardly elsewhere to be found. One passes from the solidity of masonry to the airy and delicate trickery of a spider. It is hard to believe that such slender cobwebbing will serve the purpose, and yet roof-lines and verticals are as true as the day they were built, except where neglect has let in the water. Archæology begins to look more pleasant as one imagines that he would like to know something more about the master builders of barns. Whence came the tradition? Not from Germany, I would say, and thence came these settlers, I believe. Such casual study as I have given inclines me to believe that the smaller types came earlier—those in which the proportions hardly exceeded those of a good-sized house, and that as the fertile land came more and more under cultivation, with the consequent increase in abundance of the kindly fruits, there came the necessity for more barns and then for bigger barns. Hence out of experience came the mastery that now impresses one. The style and the type underwent few changes, but finally there emerged the magnificent—if one may use that word in speaking of so humble a structure—brick and stone barns which are among the very best of the building handiwork that remains to mark the craftsmanship of a day that is commonly spoken of as bygone. But rather than look upon it as an irrecoverable past, it seems pleasanter to predict that some day it will return.

It is difficult to believe that the barn builders were also the house builders. The relationship is certainly not apparent. Where the barns have dignity and that genuineness which springs from any handiwork inspired by necessities born of experience, the houses standing by are without charm of any kind. Indeed they are repellent, in many cases. Here and there one may come across a stone or brick one that gives evidence of simplicity and a directness bespeaking gentility, but for the most part they have no inherent beauty of either line or proportion, and, failing in these things, they are apt to make the failure more glaring by a resort to clumsy detail. Let the historian and the archæologist dispute me if they will, and let them point out the examples by which I may be confounded. I will do them the honor of going with

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NEAR DILLSBURG, PENNSYLVANIA



NEAR CHAMBERSBURG, PENNSYLVANIA

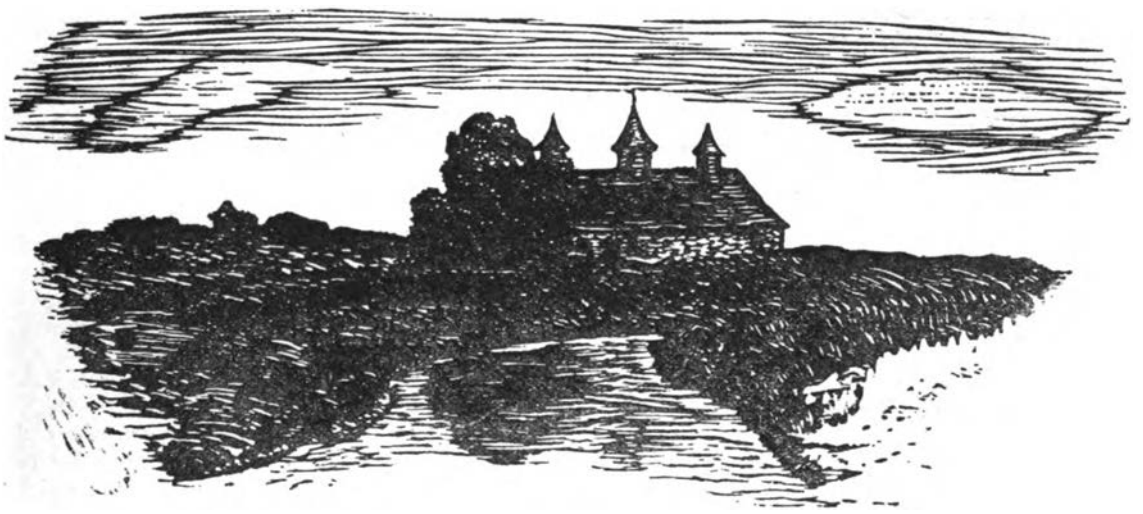
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pleasure to look at their wares. In my own experience, I saw no more than a handful of farm houses that excited the slightest interest, although I saw several score of barns, that to me were the very perfection of the builder's work.

The quality of color must not be forgotten. There are stone-ended barns that I remember standing before, just at sunset, whose walls were a tapestry indeed—blues and violets, reds and browns, greens and yellows, russets and siennas—mingled and toned and blended, and softly chanting their evening hymn, to be heard only by those who have a feeling for unsung melodies.

On one of my journeys, my friend Lankes went along. He made sketches and since then he has made woodcuts, some of which appeared in a previous issue of the JOURNAL, and more of which are used to illustrate these words. Lankes has the same feeling for husbandry that I have. He likes things that belong, and I know no artist of any day who has more faithfully portrayed that quality of affection that plain people have for the scene of their labors, the place about which their life has been twined by many a homely round. Through such eyes Lankes looks at buildings, and, after all, it is only by affection that plain things survive and radiate something akin to beauty. And that is what I mean when I speak as I do of Lankes' woodcuts. He takes homely places—homely in the sense of home—and endows them with that quality which makes you know that they have been a satisfying part in the lives of humble people—men and women who had their instincts of workmanship still fairly unimpoverished by the march of centralized industry—people who lived largely in their small world—not always gaily perhaps, but yet who lived fully by knowing the natural round of the sun and the wind and the rain, and who also knew something of what the Galilean shepherds knew. Thus they developed that deep affection for the roofs that sheltered them and their activities, and of these, barns are by no means to be forgotten. Those of which I write were the work of master builders. The forces that are today whittling them away, one by one, supplanting their superb indigenous majesty with makeshiftery of all sorts, will some day abate, and other master builders will arise to raise them anew. The instinct that created these structures cannot be blotted out.

C. H. W.



NEAR CARLYLE, PENNSYLVANIA

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The Spirit of Professionalism[1]

AT FIRST glance it might be thought that the several professions have little in common, indeed owe their discrete existence to the diverse needs of society and the limited ability of men to acquire knowledge or attain proficiency. Mastery is gained in a few things by the sacrifice of many; and diverging lines of development separate groups and specialize them until, in the more technical departments of their several callings, they become unintelligible to one another and have no common language. The Tower of Babel becomes a diagram of this tendency.

We owe ourselves the thrill of paradox, for our assembly here is an adventure; and confident as we are that it is high adventure, we must find the wit and will to prove it so. Des Moines, the mother city of our association, is in its name suggestive; the city "of the monks" reminds us that in institutions chartered and governed by churchmen, three of our tribes,—divinity, medicine and law—found leisure and instruction from the middle ages on; and these three professions for some 700 years have constituted three faculties of the European university, to which philosophy was later added, to include not only metaphysics but the whole group of natural sciences—which again to emphasize their original teachers were designated *"clergie"* in the 12th century.

The Origin of Professions

Thus to the clergy, medicine and law, science and education trace their origins in our civilization—the clergy who through the dark ages kept alive the fire of intelligence and transmitted almost alone until the Renaissance what little of the Hellenistic tradition escaped destruction at the hands of barbarian hordes. If sometime to one of a younger profession the lawyer, the doctor or even the educator shall seem opinionated, authoritarian, let him remember their august origin, and that habits have long histories.

But the basis of professionalism broadens with the interests of society and where functions diversify, special groups, organs of the community develop; as these groups become intellectually self-conscious, view their fields from the creative as well as from the possessive standpoint, become vaguely but stirringly aware of the social import of their work, leaders emerge with broader and deeper concepts of the group function, and the thoughts and deeds of these superior men, by little and little crystallizing into an expert tradition, supply the raw material out of which professions emerge.

From the middle ages this process has gone on and is active today. From the feudal nobility arose the military, a profession as ancient as any but retaining in many countries a color of hereditary cast even into our own times. From the mediæval guilds emerged the architect, the sculptor, the painter. The barbers gave us the surgeon and dentist, while the civil engineer may claim a triple origin—from the army, the guild and the architect. Nor is it alone from the powerful and respectable elements of society that we derive; the rebel too has made his contribution, his war is in our mental fabric. Chemistry owes something to the alchemist, astronomy to the astrologer, medicine to the magician, the oldwife, the culler of herbs and simples. It has never been easy to teach the generality even of the educated where the healing art leaves off and charlatanry begins. But enough—it suffices to indicate this strain in our tradition. Were we to follow this line of thought we might wander to the very portal of the pit and be indiscreet enough to relate the absurd legend that the inkstand which Martin Luther hurled at the devil, Auld Hunkie refilled and gave to the gentlemen of the press, which may explain their propendency to record the deeds of the sons of Eblis rather than those of the children of light.

Wherein the Professions Differ

Briefly, then, the professions are as divine in origin as their several fields in content. The elements are mixed in us and from each source, such for good and ill is the inertia of tradition and group habits, there has come down to each of us a particular emotional complex as well as a traditional discipline and body of knowledge. A good observer would have little difficulty in assigning each of us to our profession by little traits of bearing, unconscious gestures, small mannerisms of tone and phrase. To particularize to this audience were a pedantic superfluity. Each knows the ways of his group, the idols of his tribe. One only I would recall because not always associated with its source in the guild. The word "loyal" is recurrent in the regulations of the early guilds; the work must be "loyal," the materials "loyal." All the intelligent pride of craftsmanship, of fellowship in a band of experts who know the points of their trade, the class-conscious solidity of the burgher aware of his worth and ready to defend his burgher rights, find expression in the word and in the sanction of the hall-mark which certified the article and workmanship of standard quality. No *caveat emptor* for the customer yet; that warning reflects the less expert knowledge quite as much as the lower standards of the early middlemen, whose successors today avoid the dilemma of quality by proclaiming "the customer is always right." The differentia of professionalism are as much the intellectual integrity which accepts responsibility as the sturdy craftsmanship which delights in excellence.

Catch words and shibboleths show where the spirit moves. Is it by chance that professional men term their employers clients? The word has ancient and honorable connotations, and in the relation of the patrician patronus and client at Rome the bond of loyalty was as exacting on one as on the other. Nor was the essence of the feudal bond different, a relation between liegelord and liegemen, both loyal, for that is the meaning of "liege."

History is ever propagandist for the present against the past; it is well to remind ourselves that strong men have lived before us and created institutions which were the defense of civilization and the shelter of humanity for ages. Like all sublunary things they had their rise in human need, their prime in social service, their decline

[1] A paper read at the First Annual Meeting of the International Professional Men's Club at Des Moines, 13 August, 1924, by H. von W. Schulte, Dean of the Medical School, Creighton College, Omaha.

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in perversion of power to selfish ends as well as in changing conditions. We who have received something of the empire through the mediæval church, something from the feudal system and not a little from the guild, may take both inspiration and warning from the traditions which mould us half unconsciously. Prosperity and progress lie in loyal service to the social needs of our time, in our creative powers; corruption and decline in exploitation of the public, in our possessive desires. Experience is at one with our best tradition, a loyal recognition that power, knowledge and skill oblige to socialized conduct. Were this a mystery play and not an arid inquisition into the basis of professionalism, at this point almost might Professional Man say to Worldly Wisdom, "Almost thou persuadest me to be a Christian."

Disparate in content the professions are, multiple in origin, and carrying severally the weight of particular tradition and discipline, but laboring in and for a common public. Not yet have we found a common factor, an adequate motive for collective thinking, an efficient bond for joint action. Accepted characteristics of our position help us little, some are subject to subtraction, not all are universal or peculiar. Society, it is true, when it expresses itself in the classification of a chamber of commerce or a lunch club, separates us from business and from labor, but is prone to give us to our thinking unchancy companions. We acknowledge ourselves the product of special and highly technical training superimposed upon a prolonged liberal education.

And yet, it is common knowledge that the latter, like the vermiform appendix, is rudimentary, and whenever it seems to have attained the irreducible minimum, proves, like the atom, capable of further reduction. The dictionary tells us that our labor is of the mind rather than of the hand, an attitude which operated strongly against the rise of dentistry and surgery in which dexterity counts so conspicuously. When the physician Felix himself operated upon Louis XIV, it was recognized that professionalism had condescended to royalty, and the eminent practitioner was under the necessity of ransacking the lazarettos of Paris to find material to train his hand before applying it to heal the lesion of the King. Amazing the snobbery of our forebears, but if you think we have altogether outgrown it, ask some internist of your acquaintance in private, whether the surgeon can be trusted to make a preoperative diagnosis? Nor can we find absolute criteria in our idealism and standards, for others are capable of disinterested action and render skilled service, and no profession is confident that all its members have more than a modicum of moral desiderata and technical proficiency. Professional pride may deteriorate to captious arrogance, loyalty to unscrupulous partisanship, pharisaical scrupulosity may make a travesty of the ethical code, and the highest quality of service may be sordid with extortionate commercialism.

All of which amounts to the platitude that the personalities of professional men and the qualities of their actions vary within the wide limit which society tolerates among its members at large, from whom the professions are recruited. Equally obvious is the thought that the professional spirit is modified by the *zeitgeist* and is expressed concretely in the triplicate reactions of the individual, his professional group and the social environment of which that group is a part. Admittedly crude, this diagram adumbrates the major lines of inquiry into the problems of the professional spirit and to that extent facilitates analysis.

The Choice of a Profession

At the onset we encounter the fact that the selection of a profession is a matter of personal choice. When a youth proclaims his intention to be a missionary or a mosquito engineer, beneath the aggressive tone we discern so tremulous a hope for sympathy that at the very point of exclamation we alter the half-uttered "Good God" into "My dear boy, in the name of Heaven, why?" Inwardly we foresee the futility of debate; *pace* the chemist, who threatens to explain all things; there is no rational accounting for tastes. If Jill bobs her hair and innocently shimmies in an atmosphere of jazz and spiked punch, why should not Jack become a social worker, or follow any other reputable calling which strikes his fancy? The springs of action lie deeper and are more compelling than reason.

The rationalism which has given the tone to our thinking since the 18th century, in essence a critical period following and entailed by the enormous creative effort of the Renaissance, has, under the stimulus of modern science, been characterized by a portentous expansion of the universe to our consciousness and a corresponding externalization of interest. It has needed the modern psychologist, the catastrophe of the World War, and the shock of flamboyant social crime to recall us to ourselves and remind us that "the proper study of mankind is man."

Now man is very ancient upon the earth. The historic period bears to his racial existence perhaps a ratio so small as 10,000 to 500,000 or even 1,000,000 years. It is easy to imagine the preponderating influence of tendencies and habits acquired in the longer period as against those which we recognize as characteristic of civilized man. Nor have we outlived the mentality of the troglodyte. We have veneered him with knowledge and coated, rather than clothed, him with righteousness. Virtue we have put on like a garment and social sensibility like a robe of honor. Beneath we are pretty much the same old cake, as a politician whitewashed is still a politician. The immemorial impulses persist, the old desires linger; nay more, on their expression and satisfaction depends the vigor of the personality. Our task is not to suppress, but to sublimate, to find helpful and productive outlets for forces which are fundamental in our being.

If we recognize that the springs of action are impulses and desires, so ancient in our race that they stand often in contempt of court before the innovating tribunal of reason, and that reason oft enough, like a shrewd demagogue, makes haste to follow his constituency, we have taken a long step towards explaining "how we get that way." Bertrand Russell, from whom I have borrowed previously, considers impulse the major factor, desire the minor; and Robert Louis Stevenson, in his enquiry into the reckless heroism of English Admirals, could find no motivation of their deeds but that they liked to do them.

May we not then take the choice of profession as indi-

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cative of the instinctive and emotional make-up of the neophyte in the fundamentals of his character? Whatever his special calling, he must be attracted to knowledge more strongly than to possessions; he must have something of the craftsman in his attitude to the things of the mind, something of the artist's sense of style in his preference for quality. Above all he must be patient through a long preparation, docile under a protracted discipline, before he can assume a man's estate, claim a return for his labor, marry and establish a home. Biologically expressed, his adolescence is prolonged; and in this last we may recognize a sign of superiority, for early maturity is not characteristic of the higher types of man.

The choice of a profession then becomes a form of natural selection, and a subtle bond exists among professional men in a similarity of mental make-up. It may be noted in passing that professions are rarely chosen before adolescence is well advanced; a period in which psychologist, pedagogue and physiologist agree, the awakened social sense finds expression in enthusiasm and altruism.

The argument would be stronger could it be proved that the prime preference and tendency was toward professionalism rather than a particular profession, at least in the average case. Every teacher is familiar with the student who begins in one profession and switches to another, often for no external reason, and examples will occur to everyone of men who have expressed themselves through more than one by no means closely related profession. If it be objected that Leonardo da Vinci was too exceptional a nature to illustrate the point, it may be remembered that F. Hopkinson Smith attained noteworthy proficiency as author, painter and engineer. Probably only a well constructed questionnaire could bring the facts to light, and only the more introspective amongst us could answer categorically.

Training for the Professions

If there be in the foregoing a measure of truth, it suggests that professional men have certain basic traits in common. The education they undergo, with all its admitted defects, still contains factors which tend, more than ever before, to unite the professions into a collective body of educated men. In particular may be instanced the surprising progress and increased prestige of the professional educator. Perhaps I should say pedagogue. For there is today no conviction among teachers of the permanent usefulness of the upper ranks of the academic hierarchy, the portentious array of presidents, chancellors, supervisors, inquisitors, standardizers, secretaries, athletic coaches and miscellaneous executives, who replace to modern society the wandering sophist of the ancient world, and preëmpt the term educator. For them, the antique slur at teachers has been spitefully expanded: "Those that can, do; those that can't, teach; those that can't teach, are educators." But it is a vital question for our institutions to decide how far they can afford to depress the scholar for the sake of means to support him and his work. But this, by the way.

The striking fact is that the training of professional students is passing from the hands of practitioners into those of teachers, who are not always members of the profession for which they prepare. It results inevitably that a more homogeneous training, in method, if not in subject, is given; that increased attention is given to principles and to the scientific prolegomena of the profession; and it is to be noted that gradually more attention is being given the social aspects and historic backgrounds of the professions. So far, then, as modern tendencies are expressed in professional education, their action is in the direction of approximating professional fields by the recognition of common factors as they appear in the educational scheme. A case in point is the self-recognition of dentistry as a medical specialty, the most conspicuous advocate of the idea a chemist, a doctor of philosophy teaching in a medical school.

But since the professions are responsive to public need, the great arbiter and educator of the professional man is the general public. We are in the service of the world, and increasingly we are made to hear the master's voice. I see no derogation from professional dignity in free and frank discussion, but only incalculable gain, both to society and the professions, by and large and in the long run. It is perhaps a matter of temperament whether one prefers to trust the masses or the classes. The hope of humanity lies in the educability of the masses; the classes have usually proved too Bourbonized to change with the times. It is for us to remember, we who accept the title of doctor as an honorary degree, that doctor means teacher and few of us have been mindful of this in our dealings with the public. It is safe to say that no art or science ever attains its optimum without an instructed and discriminating public. Professional progress is always a reaction between the profession and the public. Consider architecture in Athens, law in Rome, the drama in Elizabethan England, music in Germany, primary education in America.

Inter-Professional Coöperation

Professions are hardly the rigid isolated systems we habitually conceive them. We coöperate when there is general need, and not in war only. The Panama Canal was built by three professions after one had failed, and permutations and combinations arise under the stimulus of demand. Medicine and engineering are now combining to give us the specialty of Public Health. The Juvenile Court is as much the field of the pediatrist and psychologist as of the lawyer. What profession will refuse its contribution to the Social Workers, and what will escape a reciprocal influence?

That we ourselves may learn from the general public even in the matter of professional standards may not be self-evident. The uninformed instruct the learned? Every teacher owes his debt to his pupils. Specialization is always subject to correction, if only in the matter of humanization from the general knowledge of society. A delightful example came to hand last July, at the expense and ultimately to the honor of the Press, that great educator of us all. The Chicago *Daily Tribune* offered to broadcast the Loeb-Leopold trial proceedings. Its readers declined the offer. The editors considered this rebuff, acknowledged the journalist fault and made a proposal for reform—a drastic legal restriction of pubicity before the trial. Interprofessional coöperation was explicitly suggested between the bar and the press.

Interprofessional coöperation is not really a novelty;

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it has come into being as naturally as the professions themselves, as a response to the stimulus of public demand on the part of happily and specially constituted individuals. But its practicability once admitted, literally astounding opportunities open before us. There is the whole domain of public hygiene which can only be organized on inter-professional lines. The provision for the defective and the insane, a reasonable handling of the problem of crime, indeed hardly a problem of our national and community life, but demands the light of the professional mind and the inspiration of the professional spirit. I will go farther—if this fair land of ours is to escape the "growing lust of governing," if we are to avoid the development of a crushing bureaucracy, the professions must bring their united learning and social spirit to the service of the community, to the end that government by the people may continue to humanize the world.

H. VON W. SCHULTE.

What to Do

A Dialogue

TIME: Any point in recorded Time, up to the Present or in the Future for Yet a While.

PLACE: Such a spot as the gardens of a temple overlooking the Himalayas where the guild tradition of the Master-Builders is involved with the guardianship of the symbolic language of temple building.

THE YOUNG MAN *speaks:* Guildsman, I bring greetings from my noble and honored ancestor, the learned one, Ho-Tieng. Rememberest thou him?

THE OLD MAN *speaks:* Right well do I remember him and the greetings thou bringest give great joy. Fareth he well?

THE YOUNG MAN: Yea, well, and yet I fear me much that I shall not look upon his face again, so long was my journey from yon to hither and so long will it be from hither to yon. Yet he would that I tarry no longer with him but that I fare forth upon my journey. Oft he told me, twilight times, of his own journey and of the immortal travels of Fa-hsien.[1] And glad I am to have known the tale, for now and again, on my journey, had I need of the courage of Fa-hsien, and precious was the remembrance of his patience.

THE OLD MAN: His memory abideth here, though twice a thousand years have come and gone since Fa-hsien stood where thou standest and saw the eternal peaks that thou seest. Why camest thou hither? Thou shalt have welcome, well thou knowest, and none shall press thee to depart. So, think not my question one that betokens haste. But surely a strong urge must have been upon thee. Is is the old stirring that brought hither thy loved father these three score years agone?

THE YOUNG MAN: Guildsman, I came that thou mightst tell me that which I wish to know. It was so that my honored father bade me speak the question.

THE OLD MAN: But how shall I know that which thou wishest to know?

THE YOUNG MAN: That know I not, and yet thou knowest. I have asked of many, yet no one has told me that which I wish to know. My father would not give me the words of the question I had to ask. He said that the question could not be put into words alone. But can it not be framed in speech, thinkest thou? Or was my father right, and is there something that must be admixtured?

THE OLD MAN: Good youth, give praise for so wise an ancestor.

THE YOUNG MAN: Or is it that you were once a young man and that that which I now wish to know is that which thou wished to know then? I know a fairish lot of words and I am not unskillful in putting them together, it is said. And yet my father was right, for no matter how cunningly I arrange them, I cannot make them say the thing I need to know. Surely I may not expect an answer if I cannot say the question. Yet my father said that thou wouldst understand. Dost thou?

THE OLD MAN: How shall I be sure? And yet I am, for there is that in thine eye which speaks more truly than words. What To Do, is that which thou wishest to know, and yet the word serveth not. When thou sayeth "What," thy mind is filling with the mystery of the myriad roots of things that stretch from Here, where WE are, back into the deepest caverns of Time, and from the Here where WE are, forward to the hour that is far beyond man's feeble reckoning. The little word so easily said, has in its arms not only this Thou and this I, but all the creatures that ever had or will ever have that throb of unity we call Life. In the bosom of that word are not only lying this Thou and this I, but all the streams out of which ineluctably we have come and all the streams that ineluctably from us shall flow, and whence there shall spring other streams in numbers uncountable and in flow unceasing.

THE YOUNG MAN: Yes, yes, that is it! Verily thou understandest in most wondrous perfection. Yes, yes! And now when I ask thee What To Do, how clear the question seems, for ALL comes within its purview. Thou hast given it infinite meaning. Yet, if the question is infinite, is not the answer likewise infinite?

THE OLD MAN: Good youth, thou reasonest well.

THE YOUNG MAN: No, no! 'Tis not a worthy praise thou bestoweth, for I am poor at that which men call reason. But in the world I come from I have watched men at their work and their thoughts. Much have I loved to watch the builders at their work and to marvel at the skill and cunning of the craftsmen. All of that I have

[1] One of the greatest of Chinese travelers of the fourth century who spent many years in India in study of the "Disciplines" of Buddha.

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loved well, and do love still, but of late there has come into my world a kind of thing that seemeth a madness. With curious contrivances and with subtle poisons we have learned How To Do things, to ourselves and to each other. The sickness of speed is on us. To swiftness only we bow. Like swarms we huddle in the warrens where we live, the warrens in which we burrow to our tasks, the warrens to which we return to die. The madness of the machine sends us to destroy forests that we may make paper, that we may vomit forth deluge upon deluge of words, in all of which there is seldom a kernel of Thought, or a grain of Truth. The fever is on us like a fire. Nothing seems now to be left that we do not know How To Do, and yet no one can tell us What To Do—what manner of world to make. The "How-men," as we call them, have put a fear upon the world, so that there are few who dare to ask What To Do. Is it that our passion shall destroy us?

THE OLD MAN: I know the tale. It has come hither from other travelers—they who have passed us by with the proudness of their boasting. News of many kinds of machines have they brought us, with tales of their fleet performance. They forget, if they ever knew, that our crafts and professions do rest upon the patient seeking and relating of knowledge as preparation for the tireless winning of skill. Learning What To Do, we have thus been spared the sadness of knowing only How To Do things. That is why thy father sent thee hither. I well remember his eager look when first he read those letters carven above the door of the Guildsmen's Hall. Hast thou noted them?

THE YOUNG MAN (*reading*): "I profess." Is that the law?

THE OLD MAN: There is here no law. There is the standing forth, which is the Profession and the Declaration, and yet neither of these are written down in words. Our ordinations are of the heart, which speaketh not in words. The laws that men make with their minds are of little avail. Knowing How To Do things is of little use until What To Do has been sought and found. Men who know only How To Do things, meeting with despair, think to conquer by making laws, and even more and more laws, all crying out What Not To Do. But that availeth nothing. "I Profess" is but our way of remembering, firstly, that we seek knowledge that we may add our mite to the common fund, and, secondly, that we will seek skill with ceaseless diligence, so that we may come near to perfection in using knowledge for the good of men. "I Profess" meaneth that we hold knowledge not as a possession, but as a trust. We are but trustees of the great fund bequeathed us by the ceaseless seeking of our forebears, by the toil and the sweat and the denial of those who have loved truth in thought and skill in craft. "I Profess" meaneth that we stand forth in accepting the faith that we may not put our trusteeship to the business of profit.

THE YOUNG MAN: Then any seeker after knowledge may profess?

THE OLD MAN: No true seeker of knowledge may be denied. For knowledge is like a river, continually fed from a multitude of tiny sources and which continually doth water and nourish the countryside where it floweth. Knowledge, thus coming down to us from innumerable springs, is not ours to use for profit to ourselves. We whose traditions reach back through centuries of labor at our crafts and professions, watch with misgivings the crafts and professions that flourish in such seeming splendor in other lands. We know that their end must be unhappy. We know that profit will destroy the crafts and the professions, for profit is like a rust that doth corrupt. In the end it devoureth the taker thereof and passeth beyond the control of men. That is a part of the madness of the world of which thou speakest. Learning How To Do, without first learning What To Do for the happiness of men, is the way of destruction. We have seen it to be so many, many times.

And now thou comest from afar to ask an old guildsman What To Do. And we shall have speech together and much talk of these things in the days to come. And from our Here, we shall look abroad on the madness of the "How-men." But some days ago there came yet another learned man from thy world bringing also a question that troubled him greatly. In his land, he said there was coming a custom of calling craftsmen and learned men and even traders and traffickers, "professional" men, and there had thus arisen a need to describe them so plainly that all might distinguish a "professional" from other men. Such a request seemed most strange to us, for we have learned that when the impulses of the heart are put into words by the brain, there are great dangers that men will be sadly confounded in their thought. The brain is ever the heart's enemy, we feel, as we watch men at their words and their tasks, seeking more knowledge of How To Do.

But he of whom I speak would not hear to our faith. In his land people were used to words, he said, and if they only got the right ones all would be well. Would I help him? His fellows, he said, had seen the evil of applying their brains only to How and were resolved to unite all their several skills and knowledges in the will to find out What To Do. He needed words, he said. Sentences and phrases that would move and inspire men to the new resolve. I have his words here on this tablet. Thou'rt skilled in words, thou saidst, so thou may'st read.

THE YOUNG MAN (*reading aloud from the tablet*): "A PROFESSION: *Seeking Knowledge that it may be added to the Fund of our Common Inheritance, and, in the Trusteeship of that Legacy, ever striving toward Perfect Skill in using and distributing Knowledge, without profit, for the Benefit of Mankind.*"

Guildsman, they seem fair words. I am mightily moved by them. May I also write them down? I would fain take them away with me.

THE OLD MAN: Yea, write them down indeed, though we shall speak much of these things ere thou departest hence. They are fair words, as fair as any ever I knew. If words then can avail, let them be sown far and wide. The time when men must learn What To Do cannot be too long delayed. But come to thy chamber where rest and the joy of contemplation await thee. In the evening we shall sup together and thou shalt have speech and communion with my fellow guildsmen. C. H. W.

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London Letter

IT IS A remarkable testimony to the enthusiasm of architectural educationalists that they should have gathered in an international assembly in London when summer was at its height, and also have provided an object lesson in harmony to that other London conference which was meeting at the same time.

The Royal Institute of British Architects cannot fail to feel satisfied at the results of its initiative in organizing this educational congress at a time when post-war architectural education is getting well into its stride, without, however, being crystallized into any set routine which would react against modification. The Board of Architectural Education undoubtedly felt that now was the time for a thorough examination of teaching method, since the vital principle of the architectural school seems at last to have been generally and internationally accepted.

Reports of this Congress will be perused elsewhere in the JOURNAL,[1] but some general summary of results may not be out of place here.

The Congress was divided, as far as exchange of views and information was concerned, into two sections—the aural and the visual. As regards the reading of papers, one learns to expect a deal of circumlocution, much politeness to one's neighbor, and comparatively little "meat." Expectations were fulfilled; there was little that was new to the audience in the papers or discussions during the three days' conference dealing with the Past, the Present, and the Future. Only one or two speakers, Mr. Victor Horta from Belgium, an eloquent modernist with strong views anent the necessity for early commencement of artistic studies, and Mr. Jaussely from France (who gave an inspiring glimpse into architecture of the future), were stimulating in the strict sense of the word. The Italians were very fluent and very fiery, and the richness alone of their pronunciation of the names of those familiar friends Bramante and Michael Angelo brought, to the emotional, memories of D'Annunzio's prose and consequent moisture to the eye.

The visual part of the Congress, and its most important feature, was the great international show of school work shown in the splendid settings of Grosvenor and Devonshire Houses. Schools of France, America, Holland, Denmark, Sweden, Italy, Spain, Austria, Hungary, Norway and Great Britain and the Dominions, were represented, and each country showed that while art may be international, its expression is still comparatively local.

The American exhibit was complete and beautifully presented, with a care and attention to detail which was a delicate compliment to the Congress organizers. No foreign country except Holland could vie with America in this respect. The quality of this American work exhibited a very high general level, both in technique and evidence of thorough training. Rightly or wrongly, however, one regretted the absence of marked individuality on the part of any one school, and the strong influence of continued application of the Beaux-Arts training method, not so much in its finer field of skill in design and composition, but in the presence of rather tedious and over-rendered *"elements analytiques"* and sections and plans filled with glittering but meaningless junk. The lavatories and cloak room with the $5,000 mosaic floor are, alas, still with us.

Of the foreign schools, Sweden seems to hold the palm for regarding students' work as studies for real buildings and not as paper patterns, while Holland is obviously outstanding in thoroughness of instruction though faintly stodgy in design. Austria was sketchy and fantastic, Denmark amazingly disappointing, and Italy . . . alas for Bramante!

The lighter requirements of such a Congress were catered for by timely excursions to Cambridge, to Wembley, and to Greenwich, with a grand climax in the shape of a Banquet, at which those guests whose wine was included (at $7.50) spoke with eloquence or gaiety, while the remainder (without wine at $3) listened sternly or amiably.

The Congress broke up, as was fitting, with a visit to St. Paul's and the City Churches. The Book of Proceedings will tell the tale of the serious work accomplished, but in the meantime many of us rejoice in new friends and a stronger bond between good men of a fine profession.

* * *

But while the architects discuss their present and future, a menace to the whole profession lurks in the continuance of the six-weeks-old dispute in the building trade. It is a sad story, in which it is impossible to judge fairly of case merits—but many big builders feel sympathy with the operatives. The trouble perhaps lay in the last wage reduction, which was premature, and occurred just at the time when, with the encouragement of a decent standard of living, workmen were beginning to develop a real output.

Too many people think only of the wage, not realizing that with a fine output a high wage is really a low wage both to the employer and the public who ultimately pay.

* * *

Apropos of recent notes on the Bank of England, it has just been announced that the new additions are not expected to be completed before 1935. The proposed widening of Princes Street has been definitely rejected, and Sir John Soane's outline will not be upset. The work is to be done in stages, and the actual business of the Bank will not be disturbed during the process.

* * *

Many architects have been puzzled and sometimes amused at the grandiloquent names given to various slate sizes in England, such as "Ladies," "Dutchesses," "Countesses," "Empresses," and "Princesses."

An enterprising correspondent of the *Daily Mail* reveals the origin of this nomenclature, and explains that the "titles" were bestowed by a General Warburton in 1763, when he visited the famous Penrhyn slate quarries. Not to be outdone, a certain learned judge, who later also made a visit to these quarries, is reputed to have broken out into verse somewhat as follows:

"It has been truly said, as we all must deplore,

[1] A full and detailed report of this Congress appeared in the JOURNAL for September.

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That Grenville and Pitt have made peers by the score;
But now 'tis asserted, unless I have blundered,
There's a man that makes peeresses by the hundred.
He regards neither Portland, nor Grenville, nor Pitt,
But creates them at once without patent or writ.
By the stroke of a hammer without the King's aid,
A Lady, or Countess, or Duchess is made."

* * *

Politicians in England are beginning to realize that architecture is of political importance, and that this importance is not limited to the field of Housing for the working classes.

At the Annual Prize giving of the Architectural Association in London, it was Mr. Winston Churchill who addressed the students and who spoke true words which have echoed magnificently throughout the English Press—for the Press loves Mr. Churchill for his copy.

"There was no doubt," said Mr. Churchill, "about the influence of architecture and structure upon human character and action. We make our buildings, and afterwards they make us. The whole character of British Parliamentary institutions depends on the fact, at the present time, that the House of Commons is an oblong and not a semi-circular structure."

So now the secret is out. But perhaps Barry will turn in his grave when he realizes that for which he is responsible! "X."

The Secretary's Page

44. CHAPTER REPORTS. By far the greater number of the Chapters hold no meetings, other than those called for special purposes, through the summer months. And so the Secretary's job of perusing reports is an easy one this time. WASHINGTON STATE, with its printed Bulletin; NEBRASKA, with its attractive cover and mimeographed pages, WEST TEXAS, BALTIMORE and SOUTH CAROLINA are all that are presented.

WASHINGTON STATE speaks of a delightful meeting in June, with pleasant and interesting papers, followed by a trip to the neighboring city of Tacoma, by both men and women, and visits there to interesting and new buildings. Such a program ought to bring out a good attendance. And then came the invitation to the Chapter's annual picnic at Angle Lake, on 23 August.

NEBRASKA'S August meeting shows an interesting stand by the architects which should be followed with interest. They passed a resolution as the sense of the meeting, "that all those contractors, manufacturers of or dealers in building materials and equipment, and material merchants, who make plans of buildings in whole or in part, for others than themselves, be considered as competitors in the architectural field," this to be sent to the Builders Exchange to be published in their bulletin and on their bulletin board.

WEST TEXAS shows that the Small House Service Bureau movement is receiving attention. They speak of a communication from the GEORGIA CHAPTER in regard to this, but report discussion only and no action. Correspondence between the Chapters is a good thing and the Secretary firmly believes it should be encouraged.

BALTIMORE devoted its meeting to the discussion of the proposed form of contract between architects and the city to cover professional services in making drawings for the new city schools. The Secretary was glad to see that the Chapter was called upon to give its help in getting the city to appropriate money for a Museum, and that the Chapter went on record as favoring this project. The more a Chapter can take part in civic matters the more influential and powerful it will become and the more nearly it will come to helping the architect take his rightful place in the community.

SOUTH CAROLINA is greatly interested in the common subject of architects' fees and proper forms of contracts between owners and architects. They are planning rather drastic moves in both these directions, and they issued a questionnaire to all members of the Chapter. They are also discussing that mooted word, "equal" that has a habit of appearing in specifications. They further agreed that the winter meeting of the Chapter be held at Ashville, N. C., in February, in conjunction with the winter meeting of the NORTH CAROLINA CHAPTER and the Regional Conference, at which time the Executive Committee of the Institute is to hold its meeting. GEORGIA and FLORIDA were also to be asked to be present. The Secretary does like to see this getting together of the Chapters.

45. EXECUTIVE COMMITTEE MEETING: The summer meeting of the Executive Committee was held in Minneapolis. The usual sessions were devoted to administrative matters, and in addition the Committee met at luncheon with the Executive Committee of the MINNESOTA CHAPTER, and at dinner, at the Woodhill Country Club, with a large number of members from both the MINNESOTA and ST. PAUL CHAPTERS. The dinner was under the auspices of the two Chapters, and was marked by a spirit of good will and optimism for the future.

Customarily the minutes of the Executive Committee meeting, after the deletion of privileged matters, are mailed to the entire membership with the JOURNAL. It is found that the record of subjects suitable for publication at present would be a slender one. Therefore the current bulletin will be combined with the Bulletin of the November Board meeting, which will be issued about 1 December.

The Secretary merely wishes to comment upon a discussion that took place at the luncheon which the Executive Committee gave to the Executive Committee of the Chapter. It seems important enough to be given a separate paragraph on this page.

46. SUBMITTING SKETCHES. The discussion brought out the probably well-recognized fact that Kansas was not

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the only place where the free submission of sketches brought unregulated competitions into being. The question of doing this in public work, which is the onlv type that was discussed at the Convention, was passed over at this meeting, but the matter of the submitting of sketches in private work was quite freely discussed. The Secretary gathered the following impressions as to what to do and what not to do, and hereby offers them to the membership at large for their comment if they so desire

1. Free sketches should be avoided like the pestilence.

2. If the owner won't consider an architect unless he submits a sketch, and refuses to pay anything for said sketch, there are but two things left for a reputable architect to do; either politely say good-bye, and perhaps lose a good job, or else say to the owner that he will submit a free sketch on the definite understanding that no other architects are submitting any at the same time. In other words he may, with propriety, submit a free sketch to an owner to convince said owner that he can handle the problem, but he must be sure of two things in so doing; that any consideration of any other architect or his sketches before that time is definitely precluded, and that no other architect will be considered on the job until after his fate has been settled. If the better minded architects, the fellows who won't do what our friends in England call "the things that aren't done," will all stand for this, they may lose some work in the immediate present but they will steadily put the profession back into the place which belongs to it, and help keep the respect of the community for the profession. And it won't be long before it will be possible to convince owners that paying a small fee for preliminary sketches, dealing with but one architect at a time and giving him time enough really to study the problem, will be, in the end, money and time in the owner's pocket. And the architect should not hesitate to make it possible for the owner, after full and just consideration of his attempts, to go to another architect and see whether he can better himself thereby. This sad eventuality will be much more remote if the architects, by a stiff stand for good practice, place the whole matter of getting work on a clean and fair basis.

3. And I can think of no better way to express the whole matter of soliciting work than by referring to an address delivered by a president of the R. I. B. A. to students, which closed with the words, "The best people don't do it; be best people."

47. Contract Forms. The comments on the minutes from Baltimore and South Carolina call to mind the suggestion—or should the Secretary say, request—of the Board of Directors to the members and Chapters of the Institute that they should not definitely agree on any special forms of contract with contractors or others until they had ascertained what action the Institute was taking on such matters. It has seemed to the Officers of the Institute that there were already, in the standard documents of the Institute, very excellent forms of agreement covering almost every need which can arise in the profession. With a little adaptation, in the case of meticulous parties, these can be made, by the addition of a printed slip or typewritten addenda, to meet every need. Too many different forms of contracts, which in large part duplicate each other, lead but to ultimate confusion and difficulties. All this leads the Secretary to go back to his initial statement, when this page was started, that he believed a rather large proportion of the membership of the Institute either doesn't know or hasn't taken the time to read the official documents of the Institute. The Secretary isn't throwing any stones when he makes this statement because he was in the same boat before he was honored with his present job. Now he has to read them, and the creation of this page has made it all the more necessary.

48. Good Taste in Advertising. Some time since the old ban against advertising was removed, after much strenuous discussion on the floors of many conventions and elsewhere. The Secretary recommends to the members and to all architects that they read the simple pronouncement of the Institute on this subject. To put it mildly, it is all a matter of good taste. Just who is to be the arbiter of good taste the Secretary doesn't really know, but taste apparently changes with the years. There are those who consider a simple card, so-called, in a newspaper or a magazine, bearing the architect's name, a breach of good taste, and there are those who honestly believe in it and therefore do so practice. It is quite certain that the newspapers and the magazines strenuously encourage the idea, hoping to make it a habit. It can easily become a very expensive habit. And there are those who do believe that large placards, even to illuminated signs, are quite proper methods of putting their name and fame before the public. Here again enters the questions of good taste and dignity. The Secretary likes to think of the profession as a learned and dignified profession. Advertising may be making inroads upon the dignity of our profession. The Secretary has an admiration for those who can establish unwritten codes for their conduct in all times and places, for those who play the game all the way through.

49. Regional Conferences. The regional conferences are getting under way and the Secretary hopes that valuable discussion along some of the topics in *The Secretary's Page* will arise. The Sixth Region will have its conference in Minneapolis as this page is published. The Fifth District will have its Conference at Ann Arbor in November. These Conferences are informal and form a wonderful opportunity for free, earnest and friendly discussion over all the moot points that are before us. They should be productive of great results to the profession.

Edwin H. Brown, *Secretary.*

Public Information

The Southern California Chapter has prepared the following statement concerning its Honor Awards:

The Architect has two means of articulation; the presentation of his talents in the form of design and the demonstration of his ability in the form of executed work; one is on paper, the other is on the ground. In so far as judgment of merit is concerned, the comparison of designs on paper indicates little more than the forecast of what may be, while the contemplation of the finished product offers a real basis for conclusion. The sketch, the drawing and the photograph do not tell the story

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of color, scale, environment, nor of the continuity of purpose and ability to marshal talents and forces which are necessary for the successful carrying out of the Design.

Executed work is the basis for the Honor Awards of the SOUTHERN CALIFORNIA CHAPTER; and it is interesting to note that each year the judgment of a competent jury has been reversed from a tentative decision based on photographs and sketches, when the actual buildings were visited. The influence of these Honor Awards for better architecture in the community is real. Many an architect has his eye on the annual prize when he is busy working on a new design, and the actual performance of the work is often stimulated by the suggestion "let's make this the prize winner."

For the year 1923 the jury who reviewed the work of the architects of Southern California was composed of John Galen Howard and Ernest Coxhead of San Francisco and William Parsons of Chicago. These distinguished men, invited from cities outside the jurisdiction of the Chapter, came to Los Angeles and devoted several days to the painstaking consideration of the many architectural subjects presented for their consideration. Their report states, "the Jury desires to stress the general high character of the submissions, particularly that of the residential work, which is superior in quality to all other groups, and to state that we consider the work submitted in the small house section a distinct advance over most of the previous submissions. All works receiving awards are clear, straightforward architectural designs. In them we see simplicity, probable permanence in the matter of taste and promising direction in the matter of study."

A program for the Award was written several years ago in form sufficiently acceptable to be repeated each year with slight alterations. This presents for the information of all concerned the various divisions or classes open to nomination; for example, single dwellings are divided into three sections; multiple dwellings are divided into seven sections, which include hotels and clubs used for residential purposes; likewise public and semi-public buildings and schools are sub-divided into sections. Other awards are made for completed work in community and landscape planning, and the scope of this program even includes objects of fine art as distinguished from architecture. In special cases, certificates are given for "Distinguished Honor in Fine Arts" and "Distinguished Honor in Architecture." The program states in detail the authorization, the conditions which cover the contest and the list of Awards of the previous year.

In the early spring the programs are sent out with an invitation requesting Chapter members and the public to make their nominations. These must be within the jurisdiction of the Chapters; must be work finished during the year; must state the name of owner, contractor and architect and the classification to which the subject pertains, and must be accompanied by photographs, sketches and plans. The committee has learned through experience that the grouping and display of these photographs on the walls of a big room and their careful cataloguing affords the only means of orderly inspection by the jurors. Their itinerary and many automobile trips can be planned; nominations absolutely void of merit can be eliminated; and the examination of subjects expedited and systematized.

The press has sensed the value of these competitions by giving them publicity. The publication in newspapers of the program in its entirety, makes the nominations more general and the information more explicit; the announcement of the awards inures to the benefit of those honored. Most important of all, the story goes out to the community that a movement is on foot to improve local architecture and that those who have successfully worked to this purpose are recognized.

The culmination of the efforts of the Executive Committee, the committee in charge and the jurymen is an open banquet of the Chapter at which the Honor Awards are presented with due ceremony. Sitting round the same table with the architects are the clients who have been honored and the contractors whose services have contributed to the success of the work. The certificates are handed to the owner, contractor and architect with appropriate remarks. Those architects honored this year were Witmer and Watson; Harbin F. Hunter; Carlton M. Winslow; Johnson, Kaufmann and Coate; Morgan, Walls and Clements; Myron Hunt and H. C. Chambers; A. C. Zimmerman; Edwin Bergstrom; Allison and Allison, all of Los Angeles, and Marston, Van Pelt and Maybury; E. W. Neff and Cyril Bennett of Pasadena.

Unquestionably, the worth of this competition is proved by the appreciation displayed by the recipients of the Awards; more than that, it is one more step forward in the movement for better art and architecture in Southern California.

JOHN V. VAN PELT, *Chairman,*
126 East 59th Street, New York City.

Competitions [1]

Out of the southwest cometh wisdom! It is refreshing to note the recent Institute competition for the Municipal Auditorium for Dallas, Texas. While we have only the descriptions of the drawings, we feel authorized—by the source—in congratulating the city and the profession in this instance. A good plan, a local architect, and a satisfied client—what more could be desired?

This did not happen of itself. It was the result of a wide-awake chapter of the American Institute of Architects, functioning true to form, professionally and locally. The request was made, with the logic appertaining thereto, for direct selection in two forms, and for a competition limited to those capable of discharging the trust of architectural service. The latter was chosen, five architects were selected, anonymity secured, a professional advisor employed, and the commission was won by the designers who presented the best scheme. Not only that, the losers were compensated for their efforts and time.

Hail to Texas and the NORTH TEXAS Chapter! May her example not only take root and bear other blossoms at home, but may it also influence others in places where professional spirit seems to be lagging.

Harvard University, Graduate School of Business Administration, announces that the following firms have been invited to participate in the final stage of the competition for the group of buildings to be built under the George F. Baker Foundation: Messrs. Coolidge, Shepley, Bulfinch and Abbott; Guy Lowell; Parker, Thomas, and Rice, Boston; Professor J. J. Haffner and Associates, Cambridge; McKim, Mead and White; Walker and Gillette, New York City. The first stage, unpaid, open to all architects of the United States, required that notice be filed with Professor Charles W. Killam, of Harvard, not later than 25 August.

DWIGHT H. PERKINS, *Chairman.*

[1] For another discussion of the question of competitions, see *The Secretary's Page* of this issue.

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The Question of Precedent

Precedent and Evolution

THE ECHOES of the symposium at Washington have not died away. It was a rare privilege to hear five such men, all architects and yet all masters of the Art of Letters as well.

Professor Boring gave the following definition: "Precedent to me means form which has been accepted as the proper expression of good logic, fitness and beauty, proven by the test of time and accepted as a standard upon which new expressions can be modeled and with which it may be compared." We might refer to this as a good definition of "good" precedent.

Precedent in a broader sense might be described as that which comes before. It is our historical birthright, and like some other birthrights may be sold for a mess of potage. Hubert Ripley was thinking of this when he said,

"Early to crib,
Early to rise."

Professor Boring steadies the whole discussion with the statement that "The testimony of all history indicates that art forms grow like living things. They evolve from the simplest rudimentary ideas and forms, slowly changing to conform to changing environment," and so on.

To those who believe in the uninterrupted evolution of the simple into the complex in the physical world, in civilization, in the arts, in architecture, precedent must be studied in the light of history. If history is of any value (and this has been questioned once), and if human nature in one age resembles that of the preceding ages, we can determine what effect precedent is having upon architecture today by reviewing the past and noting what effect it has had in other times.

Stated in general terms, the question may be, "At any given time in history, what is the effect upon its architecture of the architecture preceding that time?" Greece furnishes an example. Precedent, to the Greek, was vital. In each age he copied what had come before. He allowed tradition to dominate his work, even to the sacrifice of logic and practicality. Shaft, cap and cornice were false expressions in marble of half-forgotten timber construction. One temple resembled another, with seldom a radical or novel design, but with imperceptible successive refinements. So by strict adherence to the dictates of precedent, varying little within narrow limits, illogical in detail, and clumsy in construction, the Greek style gave to the world the Parthenon!

Rome tells a similar story. Each age developed new modifications of the old column and arch, endlessly repeated. The 15th century plagiarized Rome. The builders of the Middle Ages followed tradition in the gradual development of Gothic Architecture. No monument differed greatly in style from its predecessor. Then came the experience of a double tradition. The Renaissance and the Gothic met, and a new complexity resulted.

At the close of the 19th century came another new experience—not a double tradition this time, but a multiple one. Man harnessed fire and lightning, and by them saw the earth. He ate of the trees and knew all styles, all periods, all traditions. From that time he has been like a child rubbing its eyes to see whether it were awake, and like Aladdin rubbing his lamp to call new wonders into being. He has played familiarly with Classic and Gothic, with Moorish, Hindu and Egyptian.

This in itself would be test enough of his artistic poise, but along with it has come another disconcerting condition. Old methods of construction have been transformed over night into a new engineering code. Masonry walls which had always expressed but a single type of stress—compression—are suddenly called upon to add the language of tension and torsion. With the steel frame to do the real work, stone becomes a surface ornament or a protection against fire.

Here is indeed a challenge to the bewildered architect! How should it be met? In the face of a new law of construction and new demands in the size, height and form of buildings, should the architect try to cut loose from the past, and, disregarding precedent, begin again and attempt to create a new art founded solely on self-assurance and logarithmic tables? Or shall he yield himself gracefully to the inscrutable laws of evolution, and, although inclined to roam, do as the Romans did, and the Greeks, and the Goths—stick to precedent, and let the new style develop, by imperceptible additions, as the crystal does. If he does not so yield himself gracefully, he shall yield none the less, for there is no other way in nature or in art.

"The passive master lent his hand
To the vast soul that o'er him planned."

As architecture develops from age to age, the driving force is genius—the genius of the race, or the genius of the individual expressing his race and time; but the language in which this creative force speaks is "precedent," and if this language were discarded incoherence would result.

No masterpiece of literature was ever injured because it was written in an old and familiar language. The newest tale can be told in the oldest words. In the art of painting there has been in recent years an attempt to paint in "private code." This game has entertained a few, but remains a curiosity rather than a contribution in the field of art. To use precedent is universal practice. To distinguish between its proper and improper use is really only to distinguish between the sincere and insincere architect, or between the artist and the time server. What great artist was ever injured by precedent? Precedent is the strength of the strong and the snare of the weak, and as such must always work for an evolution toward the best results. In any art precedent is a basic element. Whether it is plagiarism or not in any given case is a question not of art at all, but of ethics.

Mr. Magonigle seems to give the architect rather an unjustifiable prominence in the world of plagiarists. Other arts are practised in conformity with the same laws of æsthetics and ethics. Among men of letters who is a greater artist or a greater plagiarist than Shakespeare? In music, Dvorak, in his *New World Symphony;* Tschaikowsky in his Overture "1812"; Flotow in *Martha,* and a hundred others great and small have gone even so far as to use the very melodies of other composers, but without offense. If the "gift without the giver is bare," it is

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no less true, conversely, that the theft without thieving is fair. No great artist is ever successfully imitated. Art can find expression only through individuals, and the individual cannot express beauty through the mere imitative use of forms developed by others. An artist is always a Midas, whose touch gives a new aspect and value to the old borrowed form. To the extent that he is an artist, to that extent will he necessarily color and transform all that he touches.

Then why discuss the merit of Gothic architecture in America, when there is none? Why lament the prevalence in our art of styles not indigenous to our soil nor expressive of our modern civilization? There are no such styles. There are no Egyptian, Greek, Roman or Renaissance buildings in America. Even the Spanish architecture is not so much Spanish as Mexican. Alberti might have stopped, during a lull in his career, to ruminate upon the sad state of the profession in Italy, in which every architect was slavishly measuring the old Roman work and trying to recreate it. But we know now, and he may have known then, that there was no cause for anxiety, for we recognize in the Italian reaction toward Romanism a new and virile art as distinct from the Roman as Shakespeare was from Chaucer.

A master cannot plagiarize if he will! Art is the expression of emotion, and no one can express in the form of art an emotion not felt by himself. There never was a renaissance of an old art. What is called a renaissance is not a rebirth, but a new birth. An art, like an artist, can be born but once.

As Professor Boring says: "We can put all kinds of knowledge into his brain, but design has to come out through his soul. It is comparatively easy to feel something one must express in painting and sculpture, but really to feel it in architecture, and to be able to express it, is the mark of genius."

Today our land is adorned in a thousand places with so-called Gothic buildings. These creations have Gothic mouldings, Gothic skeletons, Gothic proportions and Gothic scale, and yet they are not Gothic. They are as definitely and consistently new in style as the neo-Grec architecture was in its day. They are of the Gothic clan, but they constitute a new family, with strong family traits in common among themselves. They are the logical expression in the Gothic alphabet of a new demand in a new age. Their traits in common result from the fact that the character of this demand is a constant factor among them; and from the second fact that strong individual architects have set a pattern and an ideal which have influenced others and brought about the development of a school of architecture, which we may call for convenience 20th century Gothic.

Great oaks from little acorns grow, and it is possible for a single architect by penetrating discernment so fitly to adapt precedent to new needs that others will follow his lead and the new style be given a definite flavor. If the new need is looked upon as unsocial, and deciviliz-ing, the resulting art may be deplored as resting upon an unsound basis. One speaker, with the pose of Mrs. Lot, seems to take this view. He rehearses all the needs and finds them all good; the worship of the "beautiful gods of Olympus," as he calls them, he finds worthy where Protestantism is not. The Catholic Church excites his admiration, and the Fundamentalists his derision, which perchance will leave the Fundamentalists guessing. He gives the Crusaders, in their fantastic errand, his blessing, and the Christian Temperance Union he ridicules. He finds that democracy has "ousted statesmen and patriots and great leaders of men." Shades of Lincoln! The family he believes to be tottering. Family life is not what it used to be in the really great days of Boccaccio and Rabelais and Cervantes.

He has his own ideas about the family wardrobe, preferring chastity belts to breach-of-promise suits. He sees the superficiality and the crassness of our day and time and constructs in his fancy a History of Past Ages in which men were all noble, united and inspired. Earnest but depressed, he sees, looking backward, what the race sees ahead. He feels that our time is generically unlike all others, disassociated and catastrophic, and not part of a gradual connected evolution of society.

"Alas for him who never sees
The stars shine through his cypress trees."

If we had lost all which was soundest and best in civilization, and were wallowing in materialism and sensuality, we would discuss with little interest the value of precedent in architecture. Such a theme is engrossingly interesting, however, if we believe that architecture today is a vital and expanding force.

We are confident that, amid the confusion, the architect is not faltering unduly. For the first time he is able to choose his precedent from out the entire past. It is an embarrassment of riches, but he is meeting it with marked sobriety, and the ultimate result upon taste and style may be a cosmopolitanism unknown before and possessing its own peculiar qualities of excellence.

"He builded better than he knew,
The conscious stone to beauty grew."

WILLIAM ROGER GREELEY.

Overhead and Overhang

May one who is keenly alive to the delicate and subtle skill evolved in plagiarism, but who does not practice architecture as a profession, participate in the interesting discussion now lending interest to one of the most interesting of journals? I confess to a certain practical sense in the matter, for I am both a beneficiary of building investments as well as a general contributor to the great waste involved in our very temporary modern structures.

The point is this: There are, by careful computation, some 387,569,243 pounds of cornices hung over the sidewalks of our principal modern cities. The casualties are low, being a mere desultory fraction of a human being per pound of cornice, although the records are not by any means exact. Now the cornice is doomed. A new precedent has been set.

But until this particular and wholly nonsensical precedent was discarded—and it will of course be some time yet before it has wholly disappeared—what a burden was placed upon the owners and consumers of buildings!

The interest charge on the 387,569,243 pounds of cornices is reckoned at not less than 22,000,000 dollars a year, quite a tidy sum, if you please, and rather a high

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price to pay for experiments in precedent, *n'est ce pas?*

I mention the matter because it seems to me that so many architects are assuming that the interest in this question is purely an æsthetic one and is their own peculiar property. The fact is that architects are always playing with building materials bought with other people's money. It is the only way they can practice. But that does not relieve them of the obligation of considering precedent in the light of common sense—or does it?

A READER.

The Question of Education

Pro Schola Americana

OF PROFESSOR Ferran's hydra-headed article on *The Teaching of Architecture in the United States,* the head which politely but proudly recounts the splendid history of the Ecole des Beaux Arts and the Prix de Rome, which gives us interesting reminiscences of Colbert, Le Brun, Blondel, and Laloux needs no more attention from us than a commendatory and benevolent pat. The other head, however, which reviews our system of architectural education, points out its faults and tells what should be done, we should listen to and perhaps answer, whether it fawns, roars, or hisses; and this we will attempt to do.

In a word, according to this second head, our schools are based on a program (1) to educate as many students as possible, (2) to combine an education with architectural training, and (3) to do it all in four years.

Professor Ferran derives from the catalogue of the Massachusetts Institute of Technology that of the regular four years' course only five months (151 days) are devoted to architectural design, so he heads his criticism of our system with the opinion that in such a limited time and with such competition from cultural requirements a proper architectural training is impossible; that such a schedule results in "nothing more than a bad smattering of everything," and leads to a "diploma that means nothing." Secondly, he says, our system is aimed to benefit most the mediocre student, one result of which is that our best students are our special students, ineligible for degrees. He intimates our catalogues are falsified and our curricula padded to gain advantage over other and competing schools. In fact, and curiously, it seems to me, considering his two years' connection with one of the most magnificent institutions of learning in the world, he has no word of praise for architectural education in America whatsoever.

I used to believe the French the most open-minded of people, but I have come to think that is true only of the Frenchman in his own bailiwick. Transport him "somewhere west of Calais" and he is a provincial of the provincials. This is borne out by M. Ferran's opinion of what should be done. He'd have apparently one big Ecole des Beaux Arts, just like Paris. True, he says it's impossible, but that is what we should have. This would mean, to use more nearly his own words, (1) one central organization, (2) entrance competitions, and (3) revised curriculum. He sees hope in the Beaux Arts Institute of Design in New York, though at present "it has no purpose." Professor Ferran's summary of the organization and purpose of our architectural schools is essentially correct. They *are* organized to train and educate as many as possible, and to do it as quickly as possible, and for a very good reason.

During the period of our best taste, the Colonial, a knowledge of architecture was part of the polite equipment of every gentleman, but with the 19th century the fad for this accomplishment pased out, and between 1820 and 1880 the falsities of the Classic Revival and the atrocities of the "Parvenue" styles are eloquent of our lack of architects. The Romanesque Revival of the eighties, filled with possibilities of a great American achievement and fired by the enthusiasm of a high romance, miserably perished, like the Crusade of St. Bernard, through lack of sufficient leaders. Many a teeming metropolis, many a smiling village, is even now being desecrated by the untrained hand of the builder. No! M. Ferran, the United States is not France. Our architects don't get pensions from the government for keeping the fence of the Colonne Vendôme painted and for replacing the mouldering cornices of Versailles. With us, "the harvest truly is plenteous, but the laborers are few."

I often think of our architectural schools as great training camps in the war against ugliness, turning out a multitude of officers who even without the supreme training of a West Point have turned the tide, and slowly but surely are forcing the enemy back. We have followed Colbert's advice and have not "consecrated them to talent and reputation." The time is approaching, however, when the length of architectural courses giving degrees in architecture should be increased to five years, and undoubtedly there is a place for a great post graduate school, a position which the Ecole des Beaux Arts now in a way occupies in relation to our own schools, something which the Beaux Arts Institute of Design could become if it should acquire a great enough endowment. However, the great proof of our architectural schools is their achievements. In 1890 the United States was an architectural joke; today she leads the world.

This extraordinary phenomenon is due to our architectural schools, which have turned out in the last thirty years architects in sufficient numbers and with sufficient training to drag us out by the ears from the architectural morass in which we were floundering. Had we been dependent on "one big school," we would at the present time be relatively in the same boat as we were in 1875 when, with only Richardson and Hunt to man the oars and McKim for a cabin boy, architecture was fast headed for the rocks. This is not disparaging the splendid influence of the great school in Paris. Men who have had the opportunity of making the "grand tour" in architectural education have done splendid work as practitioners. We all know who they are.

I knew a boy, years ago, whose father dreamed for him

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a degree from Harvard in Letters, a degree from the Massachusetts Institute of Technology in Architecture, and a diploma from the Beaux Arts! But the boy pictured himself as gray-bearded and decrepit when he'd be ready to tackle his first job, so he compromised on the architectural course in the American school. Nevertheless, substituting for the first two schools any others nearest your heart, that would be the ideal education, and it really is the attempt to combine the first and the last which has given us the typical architectural school in the United States.

Perhaps the main argument for our architectural schools is the union of cultural subjects with architectural training. We had always assumed that the architect was gentleman and scholar first, if he aspired to be an architect in its fullest sense. Professor Ferran disapproves and he apparently objects to what little of cultural training exists in the Beaux Arts. And wouldn't it be curious if culture at last took shelter under the wings of architecture in these days when our great universities are fast becoming schools of commerce, and "efficiency" falls more glibly from the lips than "scholarship"?

So, Professor Ferran to the contrary, it seems to the reviewer that with all its faults our architectural schools are exceedingly well adapted to their purpose. A proof of it is that the school of today is, with only minor changes, the school of Letang and his inspired associates of forty years ago, but a greater proof than that rises before us, proof which could not be found in this generation in France. It gleams from the opalescent columns of the great Memorial in Washington, it glistens from every pinnacle of the breathless shaft of the Woolworth Tower, and it glows in the shadowy vaults and the golden arches of St. Thomas'. THOMAS E. TALLMADGE, F.A.I.A.

Marginalia Architectura

SIR GILBERT SCOTT—for he was knighted at Knowsley on the occasion of the consecration of the Liverpool Cathedral—has given a brief statement to the *Morning Post* (London) concerning his work. It seems admirably apropos of the discussion on the use of Precedent, now running its intriguing course in these columns, and is worth some extended quotation.

"Personally, says Sir Gilbert, "I think a great deal too much importance is attached to mere style; the really fundamental qualities of architecture are common to all styles. But it does seem to me that certain effects upon the mind are more readily produced by one style than by another. One may take it broadly that in Gothic the verticals dominate the horizontals, while in Classic the reverse is the case. Now for some reason, which I have not been able to discover, verticality of expression seems more suggestive of the high aspirations that one associates with religion, and it seems to me easier to get the religious feeling in Gothic than in a style embodying strong horizontals. At the same time, I think that in most Gothic cathedrals the emphasis of the verticals is unduly stressed, and thereby a great deal of calm and serenity is sacrificed, and a feeling of restlessness imparted to the building, which tends to destroy the repose and peace that in these strenuous days seem doubly necessary in a building devoted to prayer.

"It comes to a question of balance, like everything in Nature, and at Liverpool I have endeavored to combine the uplifting character imparted by vertical expression with the restful calm undoubtedly given by judicious use of horizontals. There can be no rule as to where one can draw the line—it is a question of individual feeling. Numerous alterations have been made in the design of Liverpool Cathedral from time to time, all these being prompted by this delicate adjustment between verticals and horizontals. In the first designs for the building the length was cut up into strongly marked vertical departments, formed by cross transepts throughout the whole length of the building, with a still more prominent transept at the crossing—all these transepts being higher than the adjoining main roof. The result of the length of the building being broken up by numerous cross compartments in this way was to destroy a certain amount of repose and serenity in the design of the whole; and subsequent alterations that have taken place have all been with a view to reducing this vertical character, and thereby emphasizing the influence of the horizontals. Most of these transepts have now been omitted, and those that remain, towards the centre of the building, have been kept considerably lower, so as to give a skyline unbroken except for one large central tower, which forms the climax of the whole composition. It will thus be seen that, though the architecture has been subject to many alterations, the main underlying idea—viz., to produce on the mind an effect of dignity and repose—has been steadfastly pursued."

It is also interesting to know that an effort is to be made to raise the funds necessary to carry on the work of raising the central tower space to the planned height of 170 feet, which does not include the tower above that point, and of completing the western transept. This will involve some 300,000 pounds in addition to the money now available.

* * *

In the same vein, and as touching pertinently upon this question of precedent, let us quote an article by Hope Bagenal, a distinguished British architect:

"After years of anxious archæology a few 'gothic men' achieved a mastery over mediæval forms which set them free to explore. Bentley had been a devout revivalist for years before he began the problem of Westminster Cathedral, and the two phases, his scholarship and his art, are reflected in the outside and the inside of that building. Bodley, the second Gilbert Scott, his pupil Temple Moore, Mr. Walter Tapper, are the names of great and original artists who possessed and used in an exquisite retirement the positive fruits of a movement which had caused so much chaos. They had at their fingers' ends a language of form rooted in the national climate and character, much more complex and varied than the common classic scale, and scarcely developed in respect of the broader emotional effects.

"The present Sir Gilbert Scott, grandson of the restorer, in the interval between his first and final design for Liverpool Cathedral, has explored some of these broader effects to good purpose. Sir Gilbert's first or

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winning design had a west 'front' and a gabled flank to the river, with twin towers over the transepts. The qualities which had won the admiration of the assessors, Bodley and Norman Shaw, were the strength and scale of the general massing rather than any marked originality of plan. The assessors had a difficult task. Mr. Tapper's design, placed second, had a special fitness for the site—a conspicuous sandstone rise, once used as a quarry, running north and south, parallel to the Mersey, and overlooking the riverside populations of Mersey and Dee.

"Mr. Tapper had placed on this site a huge gothic ridge without towers, resembling a longer King's College Chapel with a choir slightly stepped down at one end, and at the other an arched west porch on the scale of Peterborough. In this great design Henry VII.'s orderly Perpendicular seemed to have reached its apotheosis. How could Scott rival its appropriateness to this particular site, on which the 'flank' rather than the 'end' of any building must constitute the grand aspect? He did so by developing the æsthetic of the English central tower. Apart from all archæology each of our cathedrals is a school in the designing of masses. While the development of the French cathedral has been artistically the development of a single circular-ended hall butted against a massive west-end having twin towers, the development of the English cathedral has been a variation upon a series of groups. The English art of the group can be studied in Salisbury and Lincoln, in some of the great Norfolk churches, and in the plans, though less often in the embodiments, of Elizabethan houses. The tower, that is to say the vertical mass contrasted with the horizontal, is the characteristic design in all these examples. The existence of the large central tower in the English cathedral church has always involved an inherent dominance of the flank over the end. This dominance is reflected in the English cathedral plans with their double pairs of transepts. Salisbury is famous for its side view dominated by the large central tower. Mr. Scott has instinctively taken these essential English elements and reformalized them. The plan of Salisbury ⊣ — ⊢, has become ⊣ - ⊢. The result is that at Liverpool the central tower is now the focus of the design buttressed on each side by a pair of transepts; a choir on one side is balanced by a nave nearly equal in length on the other. The masses therefore are roughly symmetrical. A flight of steps of enormous width, leading up between the transepts on the river side to the main entrance, gives further emphasis to this the chief axis of the building, and helps to convert a flank into a front. The ridge of nave and choir extends on each side of the tower, unbroken and emphatic, unlike the original design.

"So far only the eastern wing of the cathedral is built; but when the whole plan is completed it will have the unity which byzantine and renaissance cathedral builders both sought for. Michaelangelo and Wren sought it in vain. The 'basilican' or French cathedral tradition of the single long hall was too strong for them, although they made many free designs. It has been left for a gothic revival architect to achieve this unity by the development of an English mediæval tradition generally ignored. He has found in the æsthetic of the tower the solution he required.

"Scott's plastic method is to model and quarry rather than construct and engrave. His little church in Derby Lane, Liverpool, can be studied as a first sketch for the cathedral. But this plastic method is legitimate enough for English gothic where the unit of mass is large. The flying buttress with its emphasis on construction has never had the same value in England as in France. The interior of the new choir, huge in size and unfamiliar in its simplicity, shows well the concavity of effect which characterizes his method. The necessary impersonality for a work of art on so large a scale has in the main been achieved. But a mediævalist of the old school might exclaim: 'This symmetry and lack of emphasis on construction is not "gothic" at all.' But such obviously is not Sir Gilbert's opinion. Styles are only ranges of values in form, and they are for those who can use them. With the necessary knowledge gothic is a scale delicate and powerful and possessed of a range wider than any other. Its absence of finality fits it specially for the expression of religious emotion, but gothic is not the only language which can be used for that purpose. There are religious values in renaissance, but they are limited. The artist is free to choose that which best suits his ideas."

* * *

In contrast with this brilliant architectural achievement of Sir Gilbert's, may one dwell for a moment on the parallel of Gretna. As a Green, we knew it well of old. Couples there repaired and, by the simple Gypsy procedure, were wedded. In the war, architects were called upon to prepare a building scheme for Gretna of, I think, unparalleled magnitude. Does anyone really know the cost of it? It must have run into a billion of dollars! Two complete towns, containing all that skill could order, that planning could conceive, that the humanities (it was in war-time and not in peace) could ask. Substantial, permanent, with factories covering several hundred acres, with streets, parks, playgrounds, schools, churches, public laundries and kitchens—all studied to give happiness to men and women and children—all perfected to get from industry its maximum of yield and for men the maximum of content in environment and in living. Yet, as one writer puts it, it is now a "wilderness of discarded endeavor. Our civilization has no room for it." It is quite true. As a sheer economic instrument, Gretna is the greatest thing ever built by any people. Science never gave more than it gave to Gretna, yet civilization has no room for it, and builds cathedrals. The playgrounds of Gretna shall disappear, while the near-by unspeakable slums of Glasgow will go on. Gretna has been sold as scrap! Surely, in organizing for Peace we are less than idiots. We are more helpless than babes. Is it because of that horrid word with which we play? May one not revive the suggestion, first made in these very columns as I well remember, that all nations unite to change the name and call it the Peace Department! Our whole outlook might then change. Loquaciously, it might be the waterproofing that would protect the cement that unites the bonds that hold the ties—well, you know what the statesmen and public speakers all say when they get to the dinners of the Pilgrim's Society, or to some other public event where they talk about brotherhood and kinship, and so on. Seriously, isn't it time to remember that we only learn to organize for what we talk about? If we had a Peace Department, shorn of the glory of brass and bauble, uniformed in a peaceful way, we might get to believe in Peace and learn how to organize to attain it. We shall never do it as long as the other word is glorified and its followers have their way. And without in any way disparaging the achievements of Sir Gilbert Scott, the way to Peace is through Gretna towns and not through cathedrals. S. I. R.

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From Our Book Shelf

From Alkmaar to Zwolle

Some people like Holland and some do not. I am among those who do and my memories of certain little streets such as those which wander along the canals of Edam, for example, or of certain plain white church interiors here and there, enclosed in brickwork of consummate interest, run quietly beside other recollections of orange and green, of blue and yellow, of red and mauve, strewn round about on the walls, doors and shutters of houses and, on the hulls of boats, apparently in a careless manner, and yet finally convincing you that beneath this appearance of carelessness there lies a national knowledge of the use of color which isn't to be excelled. As for cleanliness and tidiness, nothing has to be said. The interior of the house is quite as neat and resplendent as are the brass pots and pans that shine outside.

Architects seeking inspiration—adaptable ideas, that means—seem to pass Holland by. Yet where, in urban dwellings, are there more intriguing notes in gable and doorway, in wall and chimney, than in Holland? Or, in that part of the old Nederland which stretched south of the Meuse? Mr. Yerbury with his photographs, and Mr. Jarrett with his measured drawings, have done a fine piece of work in gathering together these hundred odd bits of domestic architecture,[1] and there have been few books of this kind which offer so much interest and are so well presented. Dr. Slothouwer's excellent text is sufficient. It serves as the thread which binds the whole, and with this book in hand, one may go to Holland in peace and with rare enjoyment. There is a frontispiece in color—one of old Pieter de Hooghe's interiors—and it is well done. The whole book is a bit of the fragrance of a domestic life which is by no means vanished, as anyone knows, if he has not passed Holland by with a visit to the painters at the Rijks, or the Stadt at The Hague, or the Town Hall at Haarlem. To those who know their Holland well—know it architecturally—the book will be welcomed eagerly. To those who know not that small, yet wonderfully colorful land, the book will be a delight. During the last three decades there has been an interesting development in Dutch domestic architecture, almost entirely confined to the cities, it is true, and it is this epoch which Mr. Leliman treats in his book.[2] What is one to say of it? The new is not as good as the old? That is easy to say—and yet the old would not suffice and there had to be new. So the Dutch architects took their courage in their hands and tried. Some of it is successful. Some of the 500 odd illustrations are extremely interesting. Some of them leave one cold—very cold, in fact. Yet the signs of the striving are not without power. They are flavored with vigorous strokes, with certain agreeable effects in mass, with other alluring qualities in detail. They are a note in that chord of Northern European architectural development which seems destined, in its smaller and more intimate way, to vie with the more grandiose epoch in the United States.

Mr. Leliman writes in Dutch, so I am able to gather in but a faint way the gist of what he has to say. It is but little, however, and one discerns the fact that Dutch writers are at least given to brevity, when they wish to present ideas in a pictorial manner. I take it that a "tweeden druk" is a second printing, which such a book ought certainly to deserve, whether it has had it or not.

C. H. W.

[1] *Old Domestic Architecture in Holland.* Photographs by F. R. Yerbury. Measured Drawings by E. R. Jarrett, A.R.I.B.A. Introductory Text by Dr. Ir. D. F. Slothouwer.

[2] *The Town House in Holland during the last 25 years.* By J. H. W. Leliman.

Furniture

Cutting the leaves of Mr. Hunter's book[1], one is likely to be filled with the thought of the ponderous and patient labor which must have gone into the assemblage of 480 illustrations of furniture, ranging over a period of 2,000 years. For Mr. Hunter begins with Egypt, finding his justification in the statement that "Egypt is the great-grandmother of us all." The qualification which will deter almost any challenge he offers by saying that "compared with Egyptian, all other wooden furniture is modern." But on setting out to read what the author has to say of his labor one becomes impressed anew with the number of pieces of justly reputed furniture which have found their way into the private homes and the public museums of the United States. It must have eased the labor of the seeker after illustrations, but even so, that labor must stand as impressive beyond that which too often does not go into the making of a book.

The reader may be startled, not unfrequently, at Mr. Hunter's didacticism, for he insists pretty stoutly on his classifications of styles and periods and dwells more than lovingly on the difference, for example, between the Romantic and the Classic, but he supports his reasoning with such a clarity of thought that few will rise to utter any question.

The illustrations are so copious that no one ought to be unsatisfied at Mr. Hunter's choice. The book is excellently made, although somewhat burdensome to hold—even suggesting that as typographical conditions forced so heavy a paper, two volumes would have been better than one—and yet causing one to reflect as well, that the book must stand for a long time as a reference index to every lover of furniture, and a reference index is always handier in one rather than in two volumes.

Certainly no student of furniture can afford to be without it.

J. J. M.

For the Craftsman

The late Lewis F. Day was one of those prolific and versatile designers of the William Morris, Walter Crane type which the "right little, tight little" Island knows so well how to produce. His little book on "Pattern Design" has lately appeared in its third impression.[2] In its first impression it has been on our shelves for many years, along with his book on "Enamelling," Walter Crane's "Bases of Design," "Line and Form" and so on; and this first impression has been a lasting one. Of

[1] *Pattern Design.* By Lewis F. Day (third impression, 1923). Scribner's.

[2] *Decorative Furniture.* By George Leland Hunter. Lippincott.

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course it has no "Plates to copy," but nevertheless it sets forth a lot of *thinking* already done and pre-digested —as it were—which ought to make it a "best seller" in all modern Art Circles. It is a pleasant little book to take down and glance through and it tempts one to stop now and then and linger over some intricate pattern whose anatomy has been cleverly worked out by the gifted author. We have used it as a sort of "Design Primer" for our Small Boy, and he has enjoyed it and profited by its teachings to such an extent that his father would not dare design a Tile Floor without asking Small Boy if the Old Man had the right dope. The Craftsman Architect (*Oiseau rare*) who designs his own tile patterns for wall and floor, or what not, will find in this little book a pleasant reminder of systems and schemes all too easily forgotten. H. F. C.

Notice of Removals

So many removals of readers of the JOURNAL have been effected of late that it has become increasingly difficult to insure prompt delivery of copies, especially in the case of members who change their addresses without notifying our office in advance. The cooperation of our readers in this simple, but nevertheless important, matter will be deemed a favor.

The Paris Prize

The Committee on Paris Prize has announced the results of the Final Competition for the 17th Paris Prize of the Society of Beaux-Arts Architects. The awards were as follows:

Placed First and First Medal—Harry K. Bieg, Armour Institute of Technology and Chicago Atelier, Chicago, Illinois; *Placed Second and Second Medal*—Samuel R. Moore, New York City; *Placed Third and Second Medal*—Percival Goodman, New York City; *Placed Fourth and Second Medal*—Elmer L. Babitsky, New York City; *Hors Concours*—Andrew F. Euston, New York City.

The subject was "A Transportation Institute," and the Jury of Awards was composed of Messrs. W. A. Delano, R. M. Hood, B. W. Morris, E. S. Hewitt, E. F. Sanford, Jr., W. M. Kendall, G. Lowell, H. Van Buren Magonigle, D. E. Waid, A. L. Harmon, R. H. Pearce, and H. O. Milliken, *Chairman*.

New Members Elected

BOSTON, Ralph Temple C. Jackson, Eleanor A. Raymond, *Boston;* BROOKLYN, A. F. Meissner, Beverley Robinson, *Brooklyn;* CHICAGO, Albert B. Dewey, Jr., Walter T. Stockton, *Chicago;* CLEVELAND, Dana Louis Clark, Alexander C. Robinson, III, *Cleveland;* FLORIDA, Gerald Joseph O'Reilly, *Miami;* KANSAS, Chester M. Routledge, *Hutchinson;* Walter Gilling Ward, *Manhattan;* NEW YORK, Katharine C. Budd, John Mead Howells, *New York City;* PHILADELPHIA, John J. Carroll, Philadelphia; RHODE ISLAND, John F. Hogan, *Pawtucket;* Charles Henry Lockwood, *Providence;* So. CALIFORNIA, Arthur L. Acker, Everett R. Harman, Anker Viggo Hansen, Edwin Daniel Martin, Arthur C. Weatherhead, *Los Angeles;* E. Wallace Neff, *Pasadena;* ST. PAUL, Lambert A. Bassindale, James B. Hills, Frank X. Tewes, *St. Paul;* WEST TEXAS, Leo M. J. Dielmann, *San Antonio;* Robert Leon White, *Austin*.

Institute Appointments

MR. R. CLIPSTON STURGIS, of Boston, was the appointed representative of the Institute at the celebration of the one hundredth anniversary of the founding of Rensselaer Polytechnic Institute, held on 3 and 4 October.

MR. DWIGHT H. PERKINS, of Chicago, has been appointed Chairman of the Committee on Competition for the ensuing year.

Obituary

John Abram Gurd

Elected to the Institute in 1921
Died at River Edge, N. J., 21 June, 1924

John Abram Gurd was born at Morris, Illinois, 7 January, 1870. When he was about two years old his parents moved to London, Ontario, where he received his early schooling. At 18 he went to Chicago, entering an architect's office as draughtsman for about two years, when he returned to London, later entering the Massachusetts Institute of Technology in 1893. He then went to Paris and entered the Ecole des Beaux Arts, joining the atelier of M. Laloux in 1897. There he assisted in the construction of the United States Government Building for the Exposition of 1900. Some time after the close of the Exposition he returned to this country and opened an office in New York City where he practised architecture until the time of his death. He also gave considerable time to the teaching of architectural design and allied subjects at Pratt Institute in Brooklyn and at the New York School of Fine and Applied Arts. During the war he was associated with the Y. M. C. A. in the designing and construction of huts for the various military camps.

Among his most recent buildings may be mentioned the school at Englewood Cliffs, the Emerson School, the Von Steuben School and a parish house at River Edge. He supervised the construction of the Bergen Branch Library and also designed the Pavonia Branch Library in Jersey City. A number of attractive country houses on Long Island and in New Jersey are his work.

He was an artist of very considerable ability, particularly in water color. His home in River Edge contains many examples of his water colors and is itself an artistic gem. It was originally a small Dutch Colonial dwelling nearly 200 years old which he added to and remodeled in the true spirit of the original. It is furnished with many pieces collected during his stay in Europe. ALBERT S. GOTTLEIB.

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Thomas Jefferson and The Arts

EVERY scrap of paper bearing the seal of Jefferson's hand is eagerly sought and tenaciously treasured. His letters, written in the twilight of his life, constitute one of America's richest literary and historical possessions. They portray a vivid picture of his period, of men, of motives, and of political affiliations and tendencies. Jefferson's struggles to promote education in the Fine Arts in America began in his early manhood and persisted throughout his long life, leaving in its wake a written record equally precious to lovers of Art. It was Jefferson who secured Houdon for the statue of Washington and the portrait bust of Lafayette. It was Jefferson who imported the Italian, Franzoni, as sculptor for the public buildings in Washington. Jefferson was the most energetic of the coadjutants in the foundation in Philadelphia of the Academy of Fine Arts, as the testimony of his correspondence with Peale and Mills bears warrant. In 1779, while Governor of Virginia, he succeeded in inserting into the curriculum of William and Mary College a course in Fine Arts to be taught by the Professor of Moral Philosophy. Finally, in the last days of his life, he drew the plans and supervised the construction of the University of Virginia buildings, announcing that they were to serve as models for the Professors of Architecture and then he framed the resolution, incorporating among the group of studies to be offered, the subject of Architecture—the first formal course in this subject to be offered by any American institution of learning. Here he believed that he had created an architectural group, not only possessing great dignity and beauty, but one symbolizing strength and endurance, confidence in both of which were to be desired in the nurture of a young nation still in its swaddling clothes.

He had already lived his three score and ten when, with energy unabated, he undertook this passion of his youth—the consuming passion of providing educational opportunities designed to qualify the minds of coming generations of American citizenry to defend and perpetuate the principles of popular government and to live peacefully and efficiently in his new democracy.

Being himself a virtuoso in all human knowledge, he sought to interest those best qualified in the various special fields of the arts. When building his University, if he found that Philadelphia was the centre of iron mongery, then to Philadelphia he went for his monger—his hasps, hinges, locks and escutcheons must be of the best and in the most refined taste. If the best roofers centered about Staunton, the best of Staunton's roofers must come to shelter his University. When decorative marbles were needed for his Corinthian and Ionic capitals, the best sculptors must come from Cararra where five thousand architectural and decorative modelers, cutters and polishers had clustered about these ancient quarries.

This scrap, the subject of this sketch, notwithstanding it contains only a few words in his own hand, indicating the amount in American money to be paid the Raggi's per diem and the names of the brothers on the margin for convenience of filing, is documentary evidence of Jefferson's unending desire to elevate the Fine Arts in the United States.

W. A. LAMBETH.
Superintendent of the University of Virginia.

The Contract

Livorno, February 17, 1819.

This document, which is private, has the same binding quality as a public document, and is between the illustrious Thomas Appleton, Consul General of the United States of America in Livorno, in this case employed to represent Thomas Jefferson of Virginia in America, party of the first part, and Michele Raggi, sculptor in ornament, and Jacob Raggi, sculptor in Architecture, both of Carrara but living in Livorno, parties of the second part. It is established and agreed as follows:

The above mentioned Michele and Jacob Raggi promise and obligate themselves to go to Virginia in America and employ themselves in their work industriously under the direction of Mr. Thomas Jefferson. The first in capacity of sculptor in ornament, the 2nd, as sculptor of architecture, with the following understanding:

1st—The said Michele and Jacob must hold themselves in readiness and with the first meeting of the council leave and transfer themselves to Virginia in America and then they must employ themselves at the work in connection with their profession for Mr. Thomas Jefferson, for a period to terminate in three years from the beginning of the date of drawing of this contract and they agree to work in every sort of work within their respective profession which may be ordered by Mr. Jefferson.

2nd—The expense of their voyage will be paid by Thomas Jefferson, including their return to Italy, if at the end of three years they intend to return to their country.

3rd—Thomas Jefferson agrees to furnish Michele and Jacob living quarters with board for three years in accordance with their standing as artists, and further to pay each one a salary in pieces of hard money of Spain 526 and 2 lira every year during the three years.

4th—The said Michele and Jacob Raggi agree to leave one quarter of their salary each year in the hands of Mr. Thomas Jefferson to be paid at the termination of three years.

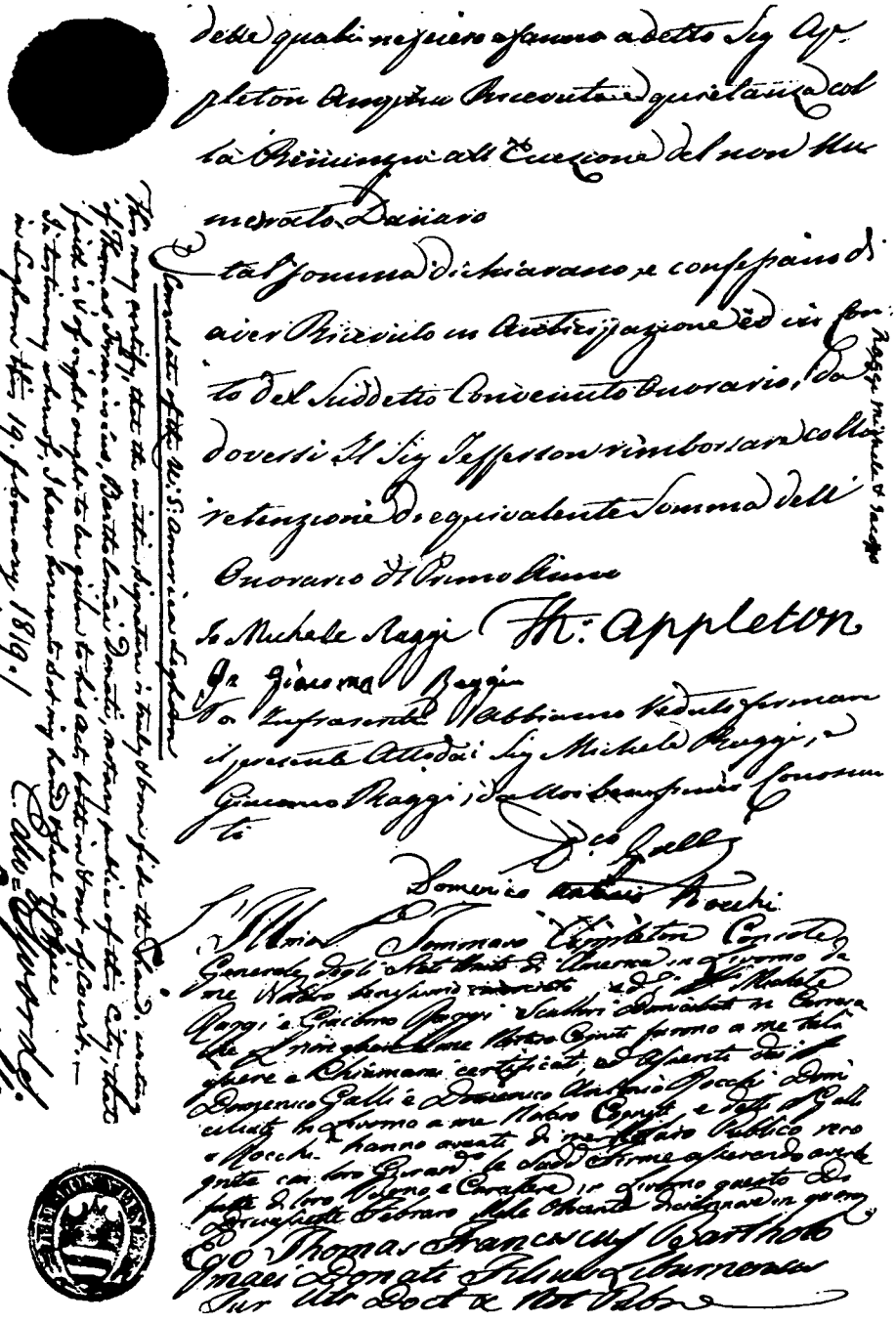
We believe that before the signing of this agreement we have received from Mr. Thomas Appleton, representing Mr. Jefferson, the first payment of 400 hard pieces of Spain, 200 each, good effective money of silver for which we have given to Mr. Appleton a receipt. This sum of money is to be considered a part payment of their salary. This sum we do declare to have received in advance of our salary and is to be taken out of our salaries by Mr. Jefferson in the first year.

MICHELE RAGGI. TH. APPLETON.
JACOB RAGGI.

We present have seen this document signed by Michele and Jacob Raggi, who are well known to us.

DCO. GALLI
DOMENICO ANTINO ROCCHI.

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THE CONTRACT

The illustrious Thomas Appleton, Consul General of the United States of America in Livorno by me Notary well known, and Michele Raggi and Jacob Raggi, sculptors, residing in Carrara, but who are not known to me, came before me to declare this a certificate and affirm that Dco. Galli and Domenico Antino Rocchi having before me Notary Public acknowledged under oath that the signatures were written by them.

Livorno—the 17th of February, 1819.

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The Allied Architects Association of Los Angeles—III



THE HALL of Justice for the County of Los Angeles was the first architectural contract entered into by the Allied Architects Association of Los Angeles. The Board of Supervisors of the County sensed the advantages of this collective service which offered a solution of their problem to obtain a worthy design for the exterior of this important structure. Those who have read the previous articles explaining the procedure of the Association will remember the general method employed in the fixing of the "parti" which would be the members' final decision on best solving the problem involved. How the theory of this procedure worked out can be seen in the following specific instance.

On 21 December, 1922, a general letter, together with topographical maps, requirements for plan and a brief statement of the conditions of the problem for the exterior design of the new Hall of Justice was sent to each of the thirty-three partners asking his coöperation and his best thought on this problem, together with a sketch for the proposed building. Two weeks later a members' meeting was called at which each presented in some form or other his ideas. Twenty-seven presented "thumb nail" sketches and these were displayed for the inspection and criticism of all, marking an epoch in Modern History of the Profession. Each partner explained his interpretation of the problem and the reasons for his treatment of it. Then in turn candid and impersonal criticism was given by the others. Sometimes, of course, the discussion grew heated but the sense of fair play and interest predominated.

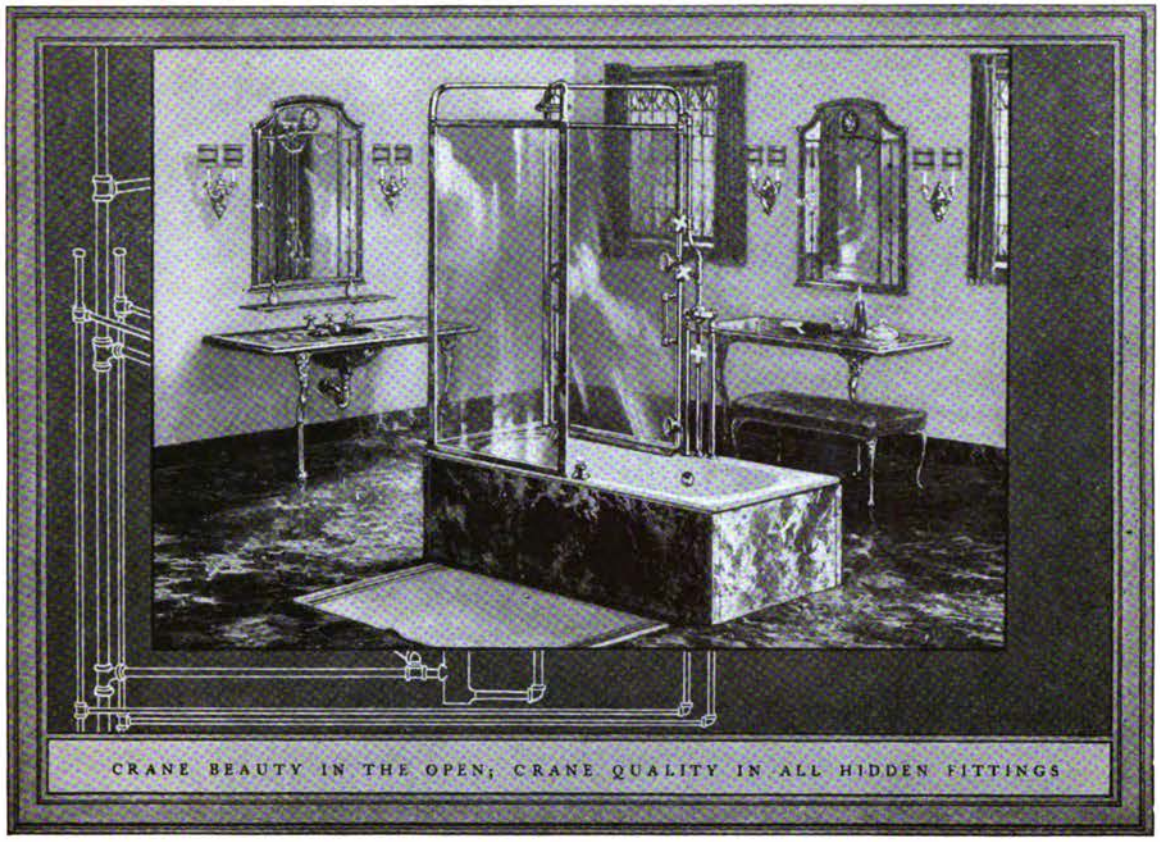
The next step was to make the selection of the right "parti." It was decided in this first venture that the decision could be best made by ballot and a system was quickly put into operation which gave each member an opportunity to express his classification of the merit of the idea in ballot form. A careful record was made of this ballot. The meeting adjourned to give the members an opportunity to revise their ideas and sketches, profiting by the criticisms received and the points brought out in discussion. For the second meeting twenty-four further developed sketches were placed before the members for further study, criticism and discussion by them. A final decision as to "parti" was not made at this second meeting but new thought and new interests inspired a third effort and the elimination of many of the original ideas. As a matter of record a ballot was taken at this meeting. Finally on 26 January, 1924, eighteen sketches, still further developed from previous criticism, were hung and considered again by the membership, of which twelve showed marked improvement over the old sketches and through the benefit of discussion. Of these, two won the marked approval of the Association.

It is particularly interesting to notice the result of the three ballots cast at the three preliminary meetings. Particularly did this system prove conclusively one of the chief contentions of the Association, that by a process of interchange of new ideas and criticism, a "parti" can be reached superior to the first thought of any individual and worthy of the best thought of all. As a matter of fact, in the three ballots taken, the design winning the seventh place on the first ballot forged ahead to take its place at the head of the list. Practically the full membership was present at each of these meetings and the finest spirit of coöperation and intense interest was shown. Since the first effort, the balloting has been unnecessary, the members having grown in appreciation and collaboration to the extent that decisions are made spontaneously.

The procedure itself is a matter of development through experience. In the early days of its history the Association was consulted and asked to collaborate in several public undertakings. The restoration of the old Missions of Southern California has always been a matter of great local interest and the Association assisted in the design for this work. Also the Association was called in to give technical opinions and reports on public structures; for the public felt that the combined expression of opinion of the members of the Association must necessarily be unbiased and represent the best thought of a body of professional men of many talents.

It is this balance of personalities, this well directed, combined service which has appealed to public officials in making contracts for professional service and from its "First Big Job," the designing of the exterior of the Hall of Justice based on the plans of the Engineering Department of the County, the Association has been entrusted with more and more of the public projects, furnishing professional advice, complete drawings, documents, supervision and administration services. More and more is the public becoming convinced that this natural and voluntary process of collective service inures to the benefit of all.

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The most interesting setting a bath can be given is in the open, away from walls and corners. And now the new Crane *Crystal* shower provides the final luxury of a curtainless, splash-proof shower adapted to use in any setting in combination with the *Tarnia* bath.

Inclosed on three sides in plate glass, framed in standards of nickeled brass, water is led to the overhead needle shower and four horizontal sprays through two of the vertical supports. The hot-and-cold mixing faucet supplies tempered water to the shower, sprays and tub. Large hand grips on main supports at both sides. All valves within easy reach.

The *Tarnia* bath shown is encased in black and white marble, matching the *Neumar* lavatory and dressing table. Tiles of any color or pattern can also be used for the setting.

CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO
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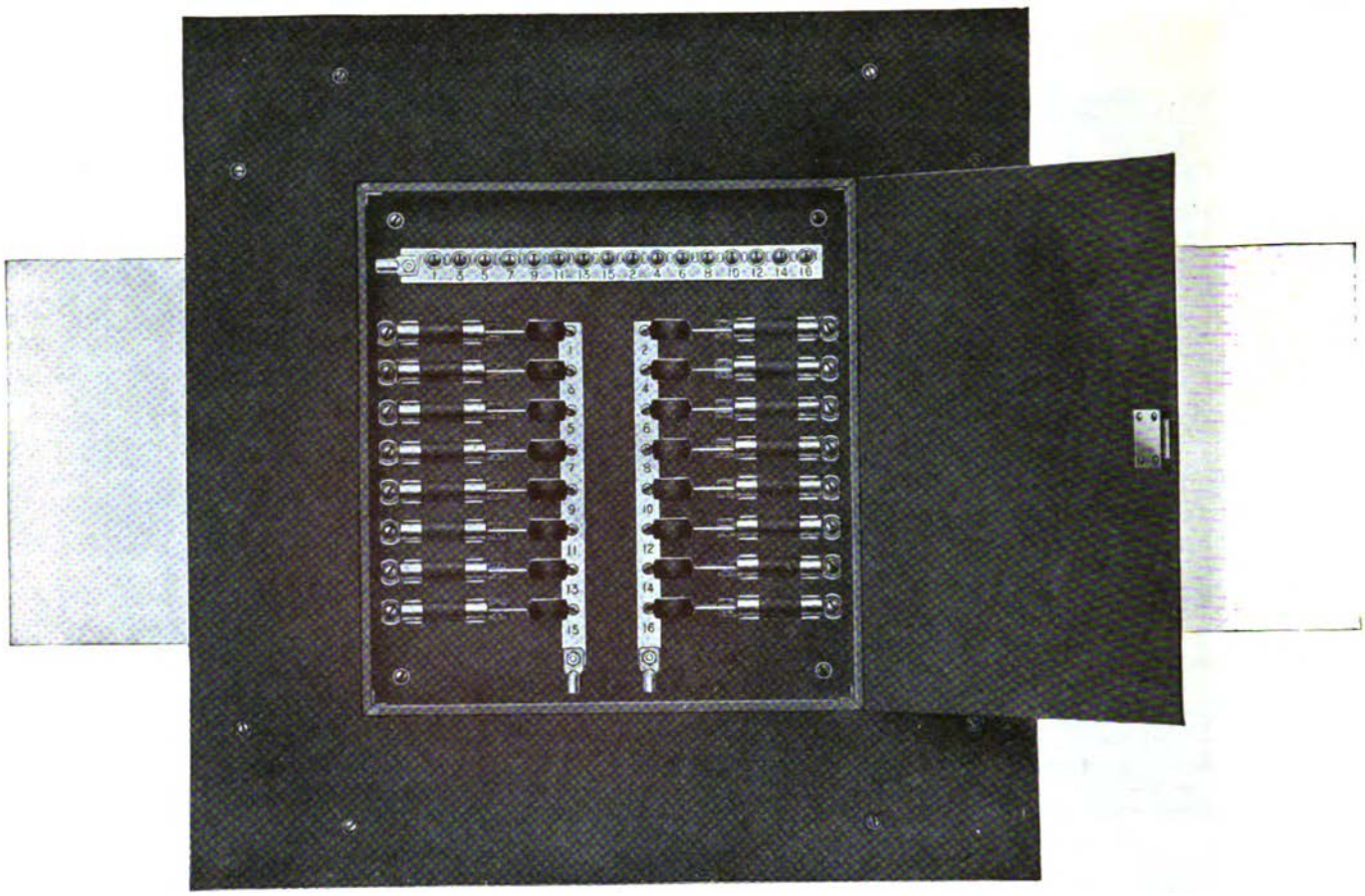
Branches and Sales Offices in One Hundred and Forty-five Cities
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Crane "Towel Warmer" No. C25010

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G-E Solid Neutral Panel Boards

That its line of panel boards may be complete, the General Electric Company has developed solid neutral types in keeping with the late 1923 edition of the National Electrical Code. Under Sec. 807, "Fuses for Branch Circuits," the new code provides for the use (subject to local inspection) of only one fuse in a grounded neutral system where the grounded conductor is identified throughout.

This form of construction permits: Decreased Installation Cost, Less Wall Space.

These advantages of the solid neutral type of board are apparent because single-pole branch switches and fuses are used, decreasing panel height, while the solid neutral bus across the top of the panel decreases the panel width.

Solid neutral live front and safety types are available to meet the requirements of large residences, hotels, hospitals, office buildings and similar structures.

Reference: Descriptive Sheet 67910.

54C-103

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y. SALES OFFICES IN ALL LARGE CITIES

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

U. S. Government Master Specifications for Asphalt for Waterproofing and Damp Proofing (12a12). (*Circular of the Bureau of Standards, No.* 160. *Federal Specifications Board Specification No.* 85.)

General.—This specification applies to asphalt intended for use with Asphalt Saturated Rag Felt for Roofing and Waterproofing (F. S. B. Spec. No. 86) as a plying cement in the construction of membrane waterproofing, or alone as a damp proof coating.

This asphalt is suitable for damp proofing and waterproofing railroad bridges, tanks, retaining walls, dams, conduits, foundations of buildings, tunnels, subways, pools, reservoirs, etc. When tested by the methods contained in this specification, it shall conform to the following requirements:

(a) *Appearance.*—Freshly melted material shall be black and glossy, and on aging one week its surface shall not become dull or show any separation of oil, grease, paraffin scale, or similar material.

(b) *Melting Point.*—140 to 171 degrees F.

(c) *Penetration at 77 degrees F.*—25 to 50.

(d) *Penetration at 32 degrees F.*—Minimum, 10.

(e) *Penetration at 115 degrees F.*—Maximum, 100.

(f) *Ductility.*—Minimum, 15 cm.

(g) *Volatile Matter at 325 degrees F.*—Maximum, 1 per cent.

(h) *Decrease in Penetration at 77 Degrees F. After Heating.*—Maximum, 40 per cent.

(i) *Soluble in Carbon Bisulphide.*—Not less than 99 per cent.

(j) *Packing.*—This asphalt shall be put up in steel drums or other suitable containers and be delivered at the site in original sealed packages as put up by the manufacturer. They shall be marked with the manufacturer's name and brand.

U. S. Government Master Specifications for Coal-Tar Pitch for Roofing (12a11). (*Circular of the Bureau of Standards No.* 157. *Federal Specifications Board Specification No.* 80.)

General. This specification applies to coal-tar pitch intended for use with Coal-Tar Saturated Rag Felt for Roofing and Waterproofing (F. S. B. Spec. No. 81) in the construction of built-up roofing over board sheathing with inclines not exceeding 3 inches to the foot and over concrete surfaces with inclines not exceeding 1 inch per foot.

This coal-tar pitch when tested by the methods contained in this specification shall conform to the following requirements:

(a) *Appearance.*—Freshly melted material shall have a uniform glossy black color, and on aging one week its surface shall not become dull or show any separation of oily constituents. Freshly fractured material shall present a satiny black surface.

(b) *Melting Point* (Cube in Water).—140 to 150 degrees F.

(c) *Ductility.*—Minimum, 50 cm.

(d) *Specific Gravity.*—1.22 to 1.34.

(e) *Free Carbon.*—15 to 30 per cent.

(f) *Distillation Test.*—Not more than 12 per cent by weight shall distill below 572 degrees F. The specific gravity of the distillate shall not be less than 1.03.

(g) *Packing.*—The coal-tar pitch shall be put up in steel drums, wooden barrels or other suitable containers and shall be delivered at the site of the job in original sealed packages as put up by the manufacturer. The packages shall be marked with the manufacturer's name and brand.

This circular also contains specifications for Sampling and Laboratory Examination.

Coal-Tar Pitch for Waterproofing and Damp Proofing (12a11). (*Circular of the Bureau of Standards, No.* 155. *Federal Specifications Board, Specification No.* 83.)

General. This specification applies to coal-tar pitch intended for use with Coal-Tar Saturated Rag Felt for Roofing and Waterproofing (F. S. B. Spec. No. 81), as a plying cement in the construction of membrane waterproofing or alone as a damp proofing coating.

This coal-tar pitch is suitable for damp proofing and waterproofing tanks, retaining walls, dams, conduits, foundations of buildings, tunnels, subways, pools, reservoirs, etc., where not exposed except during installation to temperatures exceeding 38 degrees C. (100 degrees F.), and where not subject to vibration.

When tested by the methods contained in this specification, it shall conform to the following requirements:

(a) *Appearance.*—Freshly melted material shall have a uniform glossy black color, and on aging one week the surface shall not become dull or show any separation of oily constituents. Freshly fractured material shall present a satiny black surface.

(b) *Melting Point.*—125 to 150 degrees F.

(c) *Ductility.*—Minimum, 50 cm.

(d) *Specific Gravity.*—1.22 to 1.34.

(e) *Free Carbon.*—15 to 30 per cent.

(f) *Distillation Test.*—Not more than 12 per cent by weight shall distill below 572 degrees F. The specific gravity of the distillate shall not be less than 1.03.

(g) *Packing.*—The coal-tar pitch shall be put up in steel drums, wooden barrels, or other suitable containers, and shall be delivered at the site of the job in original sealed packages as put up by the manufacturer. The packages shall be marked with the manufacturer's name and brand.

This circular also contains specifications for Sampling and Laboratory Examination.

Face and Common Brick (3f). (*U. S. Department of Commerce. Simplified Practice Recommendations No.* 7.) In accordance with the unanimous action of the joint conference of representatives of manufacturers, distributors, and users of face brick and common brick, the United States Department of Commerce, through the Bureau of Standards, recommends that recognized approximate dimensions of the above types of brick shall conform to the following:

APPROXIMATE DIMENSIONS EXPRESSED IN INCHES

Types	*Length*	*Thickness*	*Width*
Common brick	8	2¼	3¾
Rough face brick	8	2¼	3¾
Smooth face brick	8	2¼	3⅞

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Recommended Minimum Requirements for Plumbing in Dwellings and Similar Buildings (29a) (*Final Report of Subcommittee on Plumbing of American Building Code Committee. U. S. Dept. of Commerce. Bureau of Standards. Elimination of Waste Series. Pages 260. Size 6" x 9". Illustrated*). The purpose of this code is to provide a uniform basis for the enactment of plumbing codes. It is recognized that differences of climate and living conditions will occasionally be found which will justify modification of the practices recommended. The present wide variation in code requirements can not, however, be accounted for on the score of special situations.

Present Status of Plumbing Regulations.—The committee has collected a large number of plumbing codes, State laws, and local ordinances and given them careful study. The situation may be described as chaotic.

Some States have no laws which regulate plumbing other than local enactments. A few States have mandatory plumbing laws state-wide in scope. Some have laws mandatory for cities of a certain size or for cities and towns having public water supplies. Others require cities to adopt ordinances regulating plumbing. Still others have permissive acts. There is an utter lack of uniformity in legal procedure governing these matters.

In the matter of administration some cities and some States require master plumbers and journeymen to be licensed, but some cities do not require licenses even though there are plumbing ordinances. The method of permit and inspection is almost universal, where there is any regulation at all, but sometimes the inspection is under a Board of Health, sometimes under a Building Department, occasionally under a special plumbing inspector, and, in a few instances, under a Water Department.

In the matter of codes the lack of uniformity is even greater. Some State codes are simple in their provisions; others set forth rules of plumbing practice in great detail. In many States different cities have different codes. In one State there is a permissive State code as well as many city codes resulting from local enactments.

Going into detail, there are unaccountable differences in the regulations. Thus, in one State, where the whole subject of plumbing has recently been under investigation, some cities require the use of the running trap, other near-by cities prohibit its use, and some make its use optional with the owner. Minor differences in regulations in different parts of the country may sometimes be justified on account of different climatic or local conditions, but the radical differences found in cities of a single State are unjustifiable.

Nearly all present plumbing codes are applied in their entirety to all buildings within the limits of their jurisdiction. Compiled originally for dwellings, they have been extended to other types of buildings, but proper discrimination has not always been made between high and low buildings, single or multiple, public or private, or buildings used for different purposes. It is natural, perhaps, that codes should have developed in a rigid way, because the first code drawn was based on the requirements of a single city. Subsequent codes have been influenced by precedent, local pride, and selfish prejudice. Many codes have been established by copying other codes. Prejudice in favor of this or that method of construction has brought about unnecessary differences.

Supervision of Plumbing Inspection.—There is frequently a lack of coördination between the different municipal departments which, in one way or another, are concerned with plumbing, namely, the departments of health, fire, water, sewers, buildings, and streets. Under prevailing arrangements, the owner or plumbing contractor must often obtain several permits from different city authorities and arrange for inspection by several men to comply fully with the regulations. He may be obliged to go to the department of public works for permission to cut the pavement and for an inspector to see that the fill is properly made, to the city engineer for line and grade of the sewer, to the city engineer and health officer for permission to make connections with the sewer, to the division of water supply for permission to make water connection, and to the plumbing inspector for approval of his plumbing installation.

Conclusions Based on Scientific Procedure.—Because of irregularities and incongruities in plumbing codes the committee has not attempted to formulate minimum plumbing requirements by any method of selection or by any averaging process based on existing codes. Instead it has studied the entire problem anew and has based its conclusions for small buildings on legal principles and the application of modern science, but has kept in mind existing conditions so that suggested changes may not be great enough to cause serious inconvenience.

Public Control of Plumbing Justifiable.—The committee believes good plumbing is a matter which concerns health. Government has the right to protect the people's health, but people also have rights, and plumbing regulations carried too far are unjust. Regulations which will not be supported by the courts fully and without question under a liberal interpretation of the police power may be regarded as unjust. Sanitary science, however, must be the guide to justice in this matter. The principles of science change as knowledge advances, and it is proper, therefore, that plumbing regulations be reviewed from time to time and, if necessary, revised.

Legal Principles.—This report frankly recognizes that the control of plumbing by government is distinctly an act done under the police power. Police power is that inherent power of government which protects the people against harmful acts of individuals, in so far as matters of safety, health, morals or the like are concerned. Injuries against health come within the proper scope of the police power; but acts of government to enhance or promote health above normal, while laudable and often justifiable, do not fall within the scope of police power.

Some of the requirements now generally included in plumbing codes represent a failure to make the distinction between conferring a benefit and preventing an injury, and it therefore often happens that code requirements are not supported by the courts. The situation as it exists today is that the well-meaning citizens comply with regulations which cannot be enforced upon the unwilling citizen, and injustice results. The Recommended Requirements for the Regulation of Plumbing are intended to provide a basis for the correction of this situation.

Synopsis. *Part I.* Introduction. General Considerations.

Part II. Recommended Plumbing Code for Dwellings and Similar Buildings. Definition of terms. General regulations. Quality and weights of materials. Joints and connections. Traps and cleanouts. Water supply and distribution. Plumbing fixtures. Ventilation of rooms and fixtures. Soil, waste, and vent pipes. House drains and sewers. Storm-water drains. Refrigerator, safe and special wastes. Maintenance, inspection and tests.

Part III. Experimental Investigations. Standardization, Administration and Comments.

Part IV. Appendices. Minority report. Corrosion of metals in plumbing systems. A study of air currents in a horizontal waste pipe. Standard specifications of the American Society for Testing Materials.

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THE JOURNAL OF THE
AMERICAN INSTITUTE OF ARCHITECTS

Volume XII November, 1924 Number 11

A Little Tour in Spain

Seville

Photographs by the Author

ANDALUSIA is another Spain, and the Andalusian idles with an easy confidence, indicating his faith in the amiable opulence of nature. He fears no such climatic fluctuations as have hardened his brother in the north. Roses bloom here the whole year round. Palms and pepper trees make grateful shade, and the orange and pomegranate glow against waxen backgrounds of deep green. Awnings stretched across the narrow Sierpes temper the noon-day sun, and in the deeper shadows of the cafés, with their street façades all open to the air, the Sevillian sits for hours toying with a single glass but consuming innumerable cigarettes in animated discussion of the bull fight.

Summer comes early in Seville and blistering heat may be expected toward the end of May; but though the sun shines brightly on the gleaming whiteness of the town there is balm in the air as late as Corpus Christi day, and a mild chill after nightfall causes many a poor beggar to wrap his cloak high up over his mouth to ward off the evils of pulmonia. We felt the chill in the highlands as we approached the town. We had come from Badajoz, on the Portuguese frontier, in a Ford and entered the city after dark. Its twinkling lights we had seen far off after straining our eyes in the gathering dusk toward the slender silhouette of the Giralda. We hadn't intended coming to so ancient a city in such a new Ford, or even in any Ford, but had missed connections at Badajoz and were not enamoured enough of the Fonda where we made our breakfast to tarry there. So we bargained for the car, which had evidently just been uncrated, found a youth to drive it, roped our baggage to the running boards, rattled across the bridge and out along the old Roman road careless of the great historic fact that in the Peninsular War the gallant "Ben Battle left his legs in Badajoz's breaches." The Badajozans shouldn't see ours for the dust. The road lay straight before us and though our chauffeur had never been so far away as Seville, he seemed for a while on familiar ground and always on familiar terms with the Camineros, or road builders, from whom we were frequently obliged to beg water for our thirsty mechanism. Our own appetites asserting themselves, he made a detour toward a cluster of white houses called Santa Marta, which glittered like snow in the bright sunshine, informing us that we might lunch there. Royalty could have received no more royal welcome than was ours. The lusty respiration of our engine caused heads to appear at every window, while from the doorways the ground floor population of the village poured out into the narrow street normally barren of life at such an hour. They weren't expecting us, but we had *huevos* and *jamon* and *salchicon* and bread and cheese and wine. The ham and the sausage were pretty tough but Byne said the flavor was delicious. It can hardly be doubted that the entire population was loathe to see us go, and the two pretty daughters of the house who had waited on us at table said *"adios"* so sweetly that we joined in the general regret.

We made but one more stop, and that involuntarily, until we were halted at the douane on the outskirts of Seville. Our chariot had taken water again some miles back and we were tripping along just at twilight in a beautiful wild country growing more and more hilly at each turn. Suddenly at the foot of what seemed a towering mountain we stopped. We had gas —a little—but the grade was too steep, and it wouldn't flow. Night was coming, no sign of human life was visible. Our lad was embarrassed, chagrined, mortified. We looked at the white line of road zig-zagging its way toward the stars and wondered if we dared

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SEVILLE—IN THE DUKE OF ALBA'S GARDEN

the perilous experiment of backing to the top. Wracked thus with impotence and indecision, we spied another car far up making its winding descent. It came nearer and nearer. Its occupants bowed and stopped. Our boy seemed to know the driver as he had known the Camineros and, the passengers acquiescing, in a moment we had performed the operation of gasoline transfusion and with *"muchas gracias"* oft repeated, and many bows to our saviours, were on our way. We reached our hotel in time for dinner; it is hard not to in a country where people dawdle over their coffee until eleven, but no sound of melodious guitar or provocative castanets could have lured us into the shadowy streets again that night.

If towns may be said to have gender, Seville is undoubtedly feminine. There is a softness about her, a kind of beguilement of which not only the native Sevillians but all Spaniards are proud. Seville is the pretty daughter of the house. There is a gentleness about her streets and little parks, her comely whiteness, the seductiveness of her tiny patios. The Giralda is a lady flushing wanly in consciousness of her beauty, and perhaps like a woman a little in consciousness of her age. But being Moorish, she has retained her slimness through the centuries and carries her jewelled head high in the air above the great Cathedral which seems to cling to her like a fat duenna. For a cathedral with five aisles, each wide enough to serve as the nave of an ordinary church, must appear somewhat bulky.

The morning air was full of the gay clamor of bells, and as we drew near the Giralda we could see them swinging high up in the belfry as though their ancient metal tingled with life. But there was no nervous haste in their ecstasy and so there was no hurry in the streets, unless some tardy black-gowned and shovel-hatted cleric may have seemed to move a little faster. At the foot of the tower and in the shade of the Patio de los Naranjos men and boys loitered. Cocheros with their neat red-wheeled barouches drawn up at rest in the plaza before the Palacio Arzobispal waited drowsily for fares.

The Cathedral hung over us like a great brown cliff; and the pink shaft of the campanile rose straight into the blue heaven high above it. The eye can only approximate the vastness of the Cathedral; and yet such is the charm and elegance of the campanile that the majesty of the church is quite overshadowed by the grace of the old minaret. In fairness to the Cathedral one must turn away from the Giralda with a kind of moral sense of renunciation, for never was a church conceived on a grander scale. When the old mosque which had occupied its site was demolished in the first years of the fifteenth century the chapter resolved to build a monument which should cause posterity to think them mad. And when one has entered into the

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SEVILLE—PAVILION OF CHARLES V, ALCAZAR GARDENS

gloom of the interior, the renunciation complete, the sweetness of the world foregone, forgotten, the full force of the chapter's resolution may be experienced. There can be in this world few sensations comparable to the first shock of Seville's interior. Man feels himself shrinking as the great pillars soar aloft to lose themselves in the dimness of the vaults, and while the external bulk of the church is conceivable, this is the vastness of infinity. We felt alone, forsaken, and yet other tiny dots moved across the pavement at what seemed almost unattainable distances. The length and height of French churches is effective enough, one might think, but here is length and height repeated in five aisles, multiplied and reverberated, till the senses totter. The outer walls are lined with chapels rich with altars, candles, broideries and paintings, each one screened with its *reja* of heroic blacksmithing. In honor of the festival of Corpus Christi the monstrous columns of the naves were hung from ceiling to floor with long panels of faded red velvet. We had felt ourselves alone but as we moved deeper into the cavern we heard the chanting of the service behind the marble trascoro, and when we neared the crossing we became aware of a huge but dense congregation crowded between the Coro and the Capilla Mayor. Little golden bells in the beautiful *reja* of Francesca de Salamanca tinkled as the host was elevated. Priests in their most gorgeous vestments officiated before the gigantic carved retable lighted by a thousand candles, and the great organs unloosed a tidal wave of music in a dramatic climax too overpowering to be credible. Only one cathedral in the world, St. Peter's, exceeds Seville in size and none can surpass it in majesty. Its architect or architects, for it was a hundred years in building, are unknown by name, though most authorities infer that they came from Germany. Dr. Cram exclaims that this is nonsense, that the mighty fabric owes its design to divine inspiration. This may of course be so, for Gothic was not indigenous in Andalusia, and heaven surely seems nearer to Seville than Germany. But however the doctors may dispute this point, the building must awe every pigmy of these modern times, not only by its scale, but by its restraint and simplicity, and the skillful soft lighting of its abysmal depths. The exterior does not make the impression it should except from one point of view—that is from the heights of the Giralda. As one mounts the ramps of the tower, he comes abreast of the monstrous parapets and pinnacles, and from the belfry stage looks down upon an acreage of roofs and domes and gables altogether astounding. And the wonder increases as the eyes range beyond this prickly forest of spires and crockets over the white Moorish city with its labyrinth of narrow streets and byways, its flat oriental roofs and low pitched gables, its palms lifting their tufts out of little patios, its semi-tropical, altogether Mohammedan

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SEVILLE—THE COURTYARD, ALTAMURA PALACE

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SEVILLE—THE COURTYARD, ALTAMURA PALACE

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SEVILLE—THE CATHEDRAL, SOUTH TRANSEPT

aspect. Spain—rich in contrasts—holds none more striking than this, the greatest church in Christendom set in an Arabic beehive.

From the Giralda we looked down into the courts of the Alcazar, and its gardens were spread out like a map. Byne has spoken of the Spaniard's fondness for looking down into his gardens, and how he builds footpaths and promenades on top of their boundary walls so that he may enjoy the pattern of their planting. Time and again this feature may be seen in the larger gardens and its principle felt even in the smaller ones. The impulse and its satisfaction are architectural. In fact, the whole conception of the Spanish garden seems architectural in a sense that neither French nor English gardens quite achieve. Limited space is used with great effect. The small patio bounded by the walls of the house is sometimes entirely paved and set with potted plants, sometimes orange trees or peppers cast their shade near the trickling fountain, but however designed, to look down into the patio or garden from the upper windows is a delight no less important than the pleasure of resting on its tiled benches or strolling along its straight paths. The inner courtyard with its privacy and shade is a traditional feature of the Spanish house and a marked characteristic of Spanish domestic architecture, everywhere, in Castile, in Catalonia, in Mallorja, but it is here in the south that the patio attains its most charming expression. Here where the Moors lingered longest, the art of their gardens survives in its most typical manifestations. Its principles are seclusion, shade, the cool refreshment of little fountains and trickling streams of running water, diversity of level rather than great extent. The gardens of the Alcazar behind their high walls make a tiny world where Peter the Cruel might easily forget the ugliness of his blackest crimes. In the 16th century the hand of Charles V was laid over the whole place. He extended the gardens, rebuilt the palace, plastered his motto, "Plus Ultra," everywhere. The pavilion which bears his name is, however, a lovely example of garden architecture entirely harmonious with its surroundings.

There are great houses in Seville like the Casa Pilatos and the Casa de las Duenas, the home of the Duke of Alba, with gardens typical in their charm; and the owner of many an old palace blank enough and unimpressive from the street looks down into walled and arcaded courtyards with tiled or sanded paths. In the poorer quarters the people share their flowers with their neighbors and with the passerby, for tiny pots of geraniums are hung upon the balconies in rows. The houses thus wear nosegays as the women wear roses or carnations in their hair, and even shabby fellows driving donkeys deck their beasts and themselves with blossoms. No wonder the stranger finds Seville ingratiating and the native carries himself with easy

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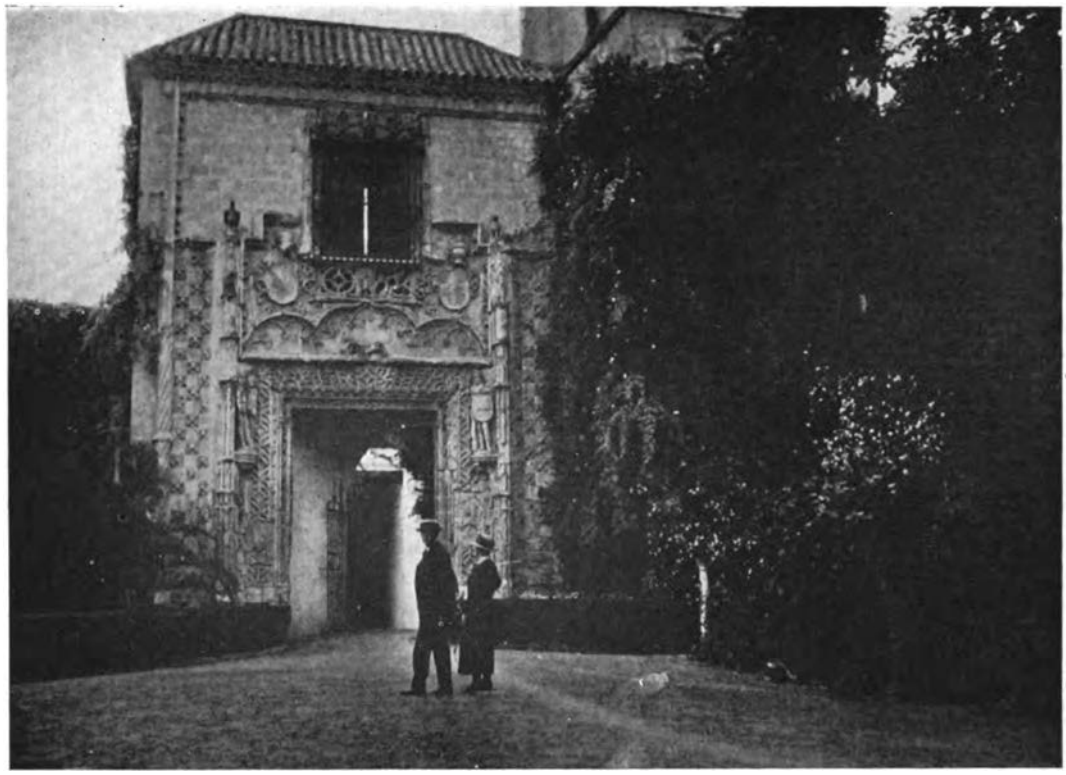
SEVILLE—THE AYUNTAMIENTO

complacence. Beggar and grandee alike seem marked by a kind of happy pride. The charm of the place is pervasive but there are fewer outstanding works of architecture in Seville than in most Spanish towns. There are no Romanesque churches such as witness the Christian zeal after the reconquest of the northern cities, for Ferdinand did not win Seville from the Moors until well into the 14th century. The present Cathedral was begun in 1401. During the reign of the Catholic Kings, Ferdinand and Isabella, and particularly after Columbus's great exploit the town flourished exceedingly. The riches of the New World were brought to her threshold and shipping lined the quays of the Guadalquivir as the city gained a monopoly of the transatlantic trade. Columbus received a great ovation on Palm Sunday, 1493, as he sailed up the river after his first voyage. But despite the new influx of wealth there seems to have been no great volume of Renaissance building, and excepting the Casa Capitulares or Ayuntamiento (the old part by Diego de Riano), which was never finished, and some scattering masterpieces in the way of *rejas,* tombs and ceilings, there are few great achievements of this period. The graceful belfry of the Giralda by Ruiz was at one time severely criticized, but who now can imagine anything finer than the tact with which the new style was grafted onto the old Moorish shaft of the Campanile?

As El Greco epitomizes Toledo so Murillo may be said to evoke the sweetness and softness of Seville, and no painter has ever served the cause of Catholicism with more sensitive understanding. Many of his greatest works were painted for conventual establishments in Seville. Many may still be seen in their original settings, notably in the Cathedral and in the Hospital of La Caridad; and some of his very finest pictures from the Capuchin Convent are now installed in the Museo Provincial. There is a trace of Oriental influence in his warm coloring, but the devotionalism of his figures and the reverence of his conceptions are purely Catholic. His types were taken from the life about him and the feeling of his pictures may be caught today in the gayety of the gamins and the mystic devotion of the native Sevillian to his church.

The great religious festivals of the Passion, Corpus Christi, All Saints and the Immaculate Conception are celebrated in Seville as nowhere else in Spain. The ceremonies in Easter week lasting several days draw crowds of foreigners as well as Spaniards. The foreign element was not noticeable during Corpus Christi week, but the town was full of visiting Spaniards and there was the stir of excitement everywhere. A great silver altar had been set up before the Ayuntamiento against a background of rich velvet and under the shade of a wide spread canopy. Here seats were set, for here the procession culminated. Early in the

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SEVILLE—GATEWAY TO THE ALCAZAR GARDENS

morning of the great day the bells went clanging and people streamed from every direction toward the Cathedral. Groups from different parishes, carrying banners and large effigies of the Virgin or holy saints borne aloft on the shoulders of men and boys, took their places as the procession formed. At ten o'clock the parade started from the Cathedral. The way was lined with reverent crowds and faces clustered at every window. No house was too mean to fling out its gayest decoration. Rugs, banners, great cloths of damask or velvet, even bright bedspreads hung from every balcony and occasionally whole façades were covered with rich stuffs. Over the heads of the crowd we marked the coming of the pageant, as the Blessed Virgin clad in her richest raiment and bedecked with her finest jewels, San Fernando the city's patron saint, the infant Jesus, Mary again and other Saints, all seated or standing on platforms draped to hide their devoted bearers, came shining down the street. The figures tottered a little as the rhythm of their carriage was not perfect, and they seemed almost to bow in recognition of the pious multitude. There were many images of the Virgin, from different churches in the city, prized relics and vessels and the great silver Custodia from the Cathedral. The Archbishop and the clergy walked, followed by priests of every order, municipal officials, and brotherhoods of laymen. After completing the line of march ranks were broken and each contingent returned to its local base where its effigy was set up outside its own church to receive the more intimate homage of the unsatisfied throngs.

Late in the afternoon two further ceremonies took place: a bullfight in the Plaza del Toros and the Dance of the Seises in the Cathedral. The bullfight may be seen almost anywhere in Spain but the Dance of the Seises can be seen only in Seville and only on the greatest feast days. It is said to be a survival of the Mozarabic ritual, but its continuance was authorized in a special bull by Eugenius IV in 1439. It is a kind of minuet gravely danced to a waltzing step by ten (not six) young boys before the high altar in the same pages' costumes worn three hundred years ago. The space between the Coro and the Capilla Mayor was closely packed long before the service and crowds standing in the aisles waited the arrival of the Archbishop to press around him and kiss his ring. During the chanting of the responses a small company of musicians with 'cellos, violins and flutes took their places inside the great *reja* surrounding the sanctuary. The service in the Coro ended on a great peal of the organ and the clergy made their way through the congregation and divided at either side of the altar. Then at a signal the stringed instruments began to play and the Seises came fluttering down the steps from behind the retable and began their dance. The music of the violins wafted higher and the dancers weaving in and

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SEVILLE—THE PARAPETS OF THE ALCAZAR

out and genuflecting to the Image of the Virgin began to sing to the strains of the orchestra. Then to the music and the singing was joined the clicking of castanets and in the impression of decorous delight and gay adoration the object of their worship seemed almost present and many a kneeling figure in the throng must have seen her smiling approval. The music ceased, the boys bowed gravely and withdrew whence they had come, the crowds dispersed out of the twilight of the naves into the bright sunshine of the streets, making their way home in happy groups or strolling toward the cafés in the Sierpes.

It is difficult to think of Seville in other than a holiday mood. Her saints are worshiped with the intimate lightness and sweetness of familiar friends. Life can be no sombre business in this city of whiteness and flowers and sunny warmth.

LOUIS LA BEAUME.

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SEVILLE—CANON'S COURT

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MANITOBA LEGISLATIVE BUILDINGS, WINNIPEG
FRANK W. SIMON, F.R.I.B.A., *Architect*

"The Journal, R. A. Institute of Canada"

From Foreign Shores

Favoring Gales

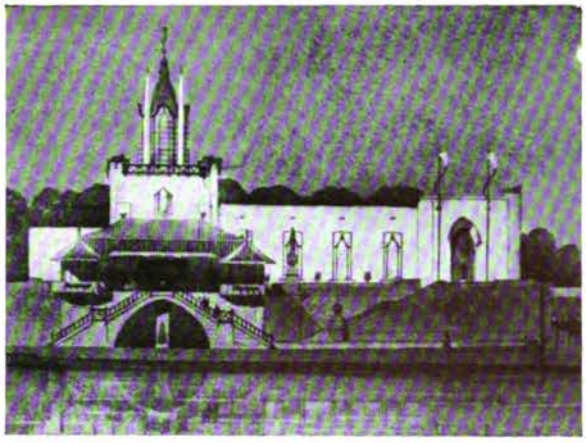
THE SHEETS of my paper boat have been spread to favoring gales and so much of value and of interest, from so many quarters, has been brought to my dock (desk) that I am almost overwhelmed with riches. Canada sends us a Statehouse which is reproduced, not because I like it, but because it is an example, good of its kind, of what the Nebraska competition taught us to avoid. (Let us hope we have learned the lesson.) There is reproduced a small English house, not only because I like it, but because it may well furnish a valuable suggestion to our Small House Service Bureau. An imaginary, if not imaginative, house ascribed to an imaginary, if not imaginative, American architect, and an English scholarship prize design are reproduced for reasons which will become quite apparent. The Richardson Building, at Port Elizabeth, is reproduced because it gives me a chance to say that if the great stone piers had not been quite so much in evidence, and the arcade at the base had been, in scale, a little more in keeping with the piers, the effect would have been extremely satisfactory. And if you would see what an imaginative child can do with cylindrical building blocks, behold the offering from *L'Architecture.*

In the Matter of Education

The British Empire Exhibition has made this a year of congresses and conventions in England—not the least of which has been the Educational Congress engineered by the R. I. B. A. and held in London in July and August. The British architectural journals and the lay press have given much space to this gathering and the various papers presented; and echoes of it have reverberated over here. *The Architects' Journal,* London, 23 July, reports, as a sort of prelude to the proceedings, interviews held by Mr. Gordon H. G. Holt with several leading Parisian architects of modernistic tendencies. I should like to quote the entire article, but must content myself with a few words attributed to M. Fr. Jourdain, with which I find myself in entire accord; (and none the less so because of the miscarriage of a certain competition, recently held in Chicago, and the remarks of the judges upon the winning and non-winning designs).

M. Jourdain is quoted as saying that "architecture is not the rearing upon some kind of plausible plan of floors, roofs and walls enriched with some sort of obvious rhythm. It is something more difficult and simpler at the same time. It is the best plan and the best section. And it is a façade free from cogitative niceties and motifs. The plan may be complicated and the façade simple, or it may be the reverse, but in either case the requirements of the client have to be reasoned out and, in the main, followed, and the financial demands met. Both will dictate the choice of materials. Now-a-days, architectural problems are so varied, the means of expressing them so diverse; truth, in other words, and beauty assume so many aspects that architects, to be worthy of their hire and representative of their period and its culture (this is rather important), will indeed need a different kind of education. The Beaux Arts system may alter; as it stands it is bankrupt. Its debit side is a drain; its credit one a fallacy; it should be wound up, or else an entirely new board of directors placed at its head. The architect of the future will need a severe and up-to-date technical education—yes, sheer technique—strengthened by informed and sensitive

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From "The Architects' Journal"

THE BRITISH PAVILION AT THE PARIS EXHIBITION—WINNING DESIGN

HOWARD ROBERTSON, S.A.D.G., F.S.ARC., AND J. MURRAY EASTON, A.R.I.B.A., *Architects*

general culture, and controlling them, industry, faith, and—courage."

To the above I heartily subscribe; and I take it from the context that "technical training" means much more than acquiring a facility in draughtsmanship; in making pretty pictures; in rendering perspectives. It means a knowledge and grasp of the principles of construction; of the characteristics and qualities of materials; of the elements of planning. All this may be taught at technical schools; should be taught, along with such mechanical draughting as may be necessary to an elucidation and presentation of the technical elements. But the power and ability to sketch, to present objects pictorially, to render, should have been acquired in the general cultural process ere technical studies are ever begun; except, at least, as begun and consummated in the continuous and continued practice of craftsmanship, which from the earliest years should accompany the general process of education. The development of the imagination, the fostering of the creative faculty, should be basic in all cultural processes; for they will stand the worker in good stead whether he enters the field of science, of art, of teaching, or of affairs. Imagination and the power to conceive are necessary to progress in any walk of life and their development should early enter into any practical scheme of education.

To submerge myself and continue just a moment with Mr. Holt's interview. Now he is talking of "changing" conditions, with M. Le Corbusier-Sauguinet: " 'Then you hold that architects must prepare themselves for the change? The Beaux Arts———' *'Cher Monsieur'*—the voice was terse and spoke with earnest resolution—'the architects needed now must be trained to create, not abortions, but children and men, that is, beings *alive*, vigorous, and beautiful. Architecture needs eugenics.' 'You are, then, in favor of a sound technical education?' 'That is so, but it must be backed by a *real* general culture, an austere and delicate training almost self-applied. I wonder'—his eyes twinkled, his head, moved by the flux of amused memories, nodded to and fro—'I wonder how many living architects possess the one or the other———'."

Ho! Hum! What's the use? Why ask the schools, or the draughtsmen they beget (few of them ever will be architects in the sense implied above), to leave the primrose path! It is the easiest way, "this copying of antique art," both to teach and to practice. So why not take the "easiest way" and in practice prostitute one's art—as the lady in the play did her morals; and for pretty much the same reason.

In the Matter of Culture

Let us leave the sad subject of education for the moment and hark back to culture. What is it? And how is it gained? Culture comes not altogether from drinking deeply at the fonts of learning and wisdom, but comes, rather, through an assimilation of the draught. It means the ability and sensitiveness to feel the rhythmic flow of cosmic forces through the heart and brain; to feel the movement of world thought and tendencies; to recognize the presence and bearing of individual ideals and



From "The Architects' Journal"

THE JARVIS STUDENTSHIP ACCEPTED DESIGN—A PUBLIC SCHOOL CHAPEL

M. A. SISSON, *London University School of Architecture*

predilections—the ability to sense all this and the power to direct the rhythmic impulse into the useful channels of philosophy; into the channels of morals, science, and art. I, too, "wonder how many living architects possess the one or the other———."

I am not sure but that knowledge is an altogether necessary handmaiden of culture; and there are times when I most heartily wish that I were *en rapport* with the mistress that she might lend me the services of the maid. One of those times is when I am trying to sort my cargo and label the items for inspection. One would like to be sure that the object before him was a snapping turtle or a kitten (if indeed it were either), that

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he might know whether to take it up by the nape of the neck or by the tail. There are before me on my decks offerings from Czecho-Slovakia, Denmark, France, Germany, Canada, Mexico. If only the plans, independent of the legends beneath them and the designations of the various chambers, which I cannot translate, would explain themselves! Before talking too much about a plan I should rather like to know whether it was for a natural history museum of stuffed specimens, or a royal school for living, breathing girls. The elevations do not help me out, much, in the present state of sophisticated design. I should rather like to know whether what I am looking at is intended to represent a mighty Statehouse set in a public park, or a private chapel in the grounds of a minor princeling. Evidently, I am not sufficiently sensitive to world movements (for these examples are not local), to be considered cultured; while my knowledge is insufficient to make me a reliable interpreter. I wish those who send these cargoes from Foreign Shores would ship their interpreters along with them.

I am not thinking, as I quote Tom Hood, of the offerings from France alone (I stood near the head of my class in college French forty-seven years ago!), but of those others before which I stand equally mute.

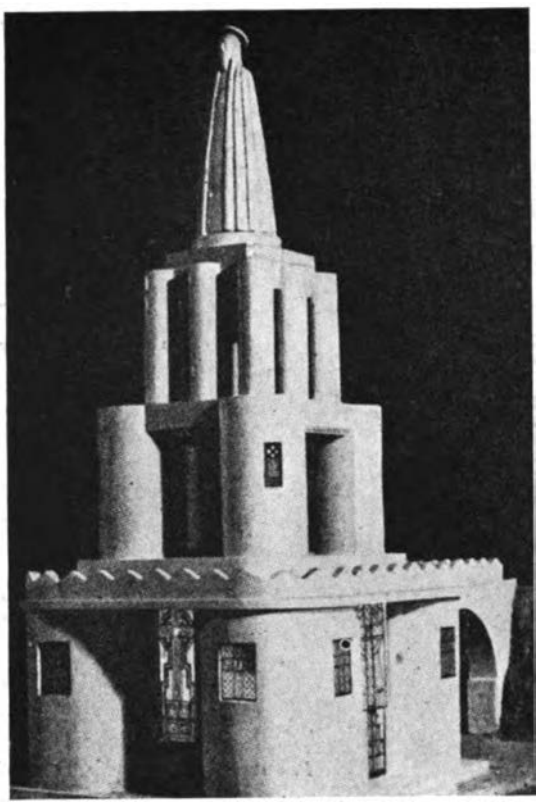
"Never go to France
  Unless you know the lingo;
If you do, like me,
  You will repent, by jingo.
Staring like a fool,
  And silent as a mummy,
There I stood alone,
  A nation with a dummy!"

Styl, published at Praha, if I am not mistaken (I know that Praha is a town, not English for prayer),



From "The Architects' Journal"

THE JARVIS SCHOLARSHIP ACCEPTED DESIGN—
A PUBLIC SCHOOL CHAPEL
M. A. SISSON, *London University School of Architecture*



From "L'Architecture"

CHAPELLE DU SACRÉ CŒUR, ILBARITZ
(BASSES-PYRÉNÉES)
CH. SICLIS, *Architect*

presents designs submitted in competition for an Acropolis; but the nature of the buildings must remain a mystery to me until someone translates the text; and even then I may not be able to grasp the idea. I may be affected as I frequently am by designs submitted in our own Beaux Arts Institute competitions. I really cannot believe them. The words of the legends beneath the designs are often so ignoble, as compared with the stupendous and monumental interpretations given them by the draughtsman, that it is sometimes a strain on the imagination to establish any sort of relationship between the original theme and its developed form. I have never, heretofore, mentioned the work of the Beaux Arts Institute of Design in these papers; for while it is more or less directly, that is more directly or less indirectly, an importation from Foreign Shores, the fabrication has been done on this side. However, as some of its products have been published recently in British and Parisian journals in connection with an exhibition of school work, American and other, I feel, just at present, quite at liberty to exercise my prerogatives as Stevedore of this frail craft.

An Appreciation of American Talent

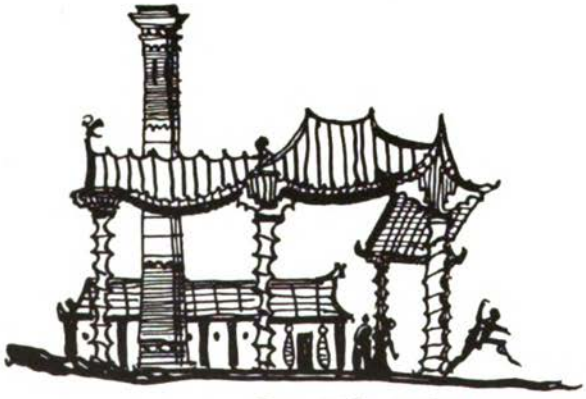
In *The Architects' Journal,* London, 27 August, appears an appreciation of the work and personality of an American Master of Architecture, one Alvin K. Athabois

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From "The Architects' Journal"
THE RICHARDSON BUILDING, PORT ELIZABETH
JONES & MCWILLIAMS, FF.S. ARCH., *Architects*

(*né* Attaboy), who I seem never to have met at any of the professional gatherings at which I have been present; nor do I find his name in any list of architects which I have consulted. I have had occasion heretofore to remark that our English friends, in striving to find something pleasant to say about their American confrères, seem always to choose men or works in which they think they see themselves reflected. It is notably so in the present instance. Not only, if reported correctly, does Mr. Athabois use certain refinements of speech so dear in kind to the cultivated Englishman—and to the cultivated Englishwoman, too, if one may



From "The Architects' Journal"
GIOTTESQUE CHIMNEY TO A CHINESE LAUNDRY
ALVIN K. ATHABOIS, *Architect*



From "The Architects' Journal"
THE VIRGIL X. VOKONIK RESIDENCE
ALVIN K. ATHABOIS, *Architect*

trust the well-informed and observing author of *The Little French Girl*—but he indulges in the practice, so common in America, as in England, of "lifting" foreign motifs and incorporating them in his designs. I believe I have already, once or twice, or maybe more times, called attention to this proclivity on the part of American, as well as British, designers. Mr. Felix, who writes the appreciation of Mr. Athabois, claims never to have been in America, but to have gained his understanding of Mr. Athabois and his manners and methods from Mr. Stephen Leacock (a Canadian), and by a "visit to the animated pictures." And there, in the animated pictures, it dawns upon me, is where I have met in action this Mr. Felix, the Super-Cat, who tries so hard to make it pleasant for his friends! And, really, he is comical.

To establish my thesis, that the English admire in Americans the image of themselves which they see reflected, I shall compare the design of Mr. Athabois' Virgil X. Vokonik residence, which Mr. Felix illustrates in his article, with the Prize Roman Scholarship design presented in this same number of *The Architects' Journal*. The subject of this scholarship design is a Public School Chapel and in composition consists of a central French military Gothic mass connected with nondescript end pavilions by a classical colonnade. The Gothic mass is embellished with a tasteless Renaissance portal on its exterior and a worse than tasteless Renaissance high altar within. The dominant mass of the Vokonik resi-



From "The Architects' Journal"
A HOUSE AT CRANLEIGH: THE GARDEN FRONT
W. SYDIE DAKERS, *Architect*

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dence is in a comparatively pure Georgian Renaissance and is connected with the very subordinate end pavilions in mediæval half-timber by a pure Georgian pilastered passage. While the buttresses in both designs have the same curve, the general effect of the American design is purity and chastity itself as compared with the English.

Mr. Felix, too, advises English visitors to New York to "be sure to see Athabois' Giottesque Chimney to a Chinese Laundry." Following Mr. Felix's generous example (for advice is free), I suggest that those Britishers who cannot make the trip to New York may see a similar and quite as satisfactory design in the British Pavilion at the International Exhibition of Modern Decorative and Industrial Art, which is to be held in Paris next year. By this I do not mean to insinuate that the design for this to-be-Pavilion in Paris, well illustrated in *The Architects' Journal*, for 20 August, is not a very appropriate design for its purpose, for it is—but I do not wish to have Mr. Athabois' equally meritorious design viewed with any mental reservations. Perhaps, being an American, I am partial to my compatriot's work.

There is so much of value in these various papers on my desk that it seems unfair that I should have them and not be able to share more of their contents with my readers. I can only say that should copies of these recent issues of *The Architect* and *The Architects' Journal*, both of London, *L'Architecture*, Paris, the *Journal Of The R. I. B. A.*, and that of the Institute of Canada, and others from which I have culled, come your way you will be well repaid for giving them more than a superficial perusal.

IRVING K. POND.

Architecture in the United States

ON REVISITING New York recently, after an absence of seventeen years, I have been impressed by the wonderful advance that architecture has made there in the meantime. Seventeen years ago two movements divided American architecture. There was on the one hand a Gothic revival which concerned itself with ecclesiastical and collegiate buildings, and was associated more particularly with the work of Messrs. Cram, Goodhue and Ferguson, and there was the Classical and Renaissance revival which accepted the leadership of Messrs. McKim, Mead and White. The latter was very much in evidence in New York, where quite a number of interesting buildings on Renaissance lines had found their way into execution, as was also the case in Chicago and cities of the East. But they were all buildings of a kind that lent themselves to treatment upon traditional lines. For that peculiarly American product, the skyscraper, was unaffected by either movement. Owing its existence to purely commercial considerations, it apparently defied architectural treatment. It remained "the packing box on end," ugly and unashamed, and doubts were expressed whether the problems of design it presented could ever be successfully overcome.

But that has ceased to be true. The skyscraper is no longer the pariah of architecture. The problems which it presents have been attacked and successfully overcome by the architects of America; for the skyscrapers that have been built of recent years are no longer gaunt utilitarian buildings with no pretensions to beauty or covered with meretricious ornaments, but buildings of real architectural merit. They are handled by their architects in a big way, with contrasting planes and large surfaces unbroken except by windows which are without mouldings, the whole presenting an appearance of severe grandeur that is unique and can be matched nowhere else in the world. Yet, strange to say, this architecture is finally a purely economic creation, owing its existence to the development of mechanical invention, advertisement, the desire to capitalize ground values and the new zoning law, which limits the height of the cornice line on the street while permitting the building to rise to any height the site will allow, so long as it lies within a line drawn at a certain angle, and thus encourages a pyramidal shape for the upper stories which is extremely effective and fruitful of architectural effect.

Though we have no option but to recognize that the skyscraper may be a thing of beauty, my appreciation is entirely æsthetic, for I am no advocate of the introduction of the skyscraper here. I think the London County Council is entirely in the right in refusing to allow them to be built in London, for these gigantic buildings bring into existence many evils. The insoluble traffic problem of New York is intimately connected with the skyscraper, for with so many people living and working in such a limited area, congestion of traffic is inevitable. Then there are the problems of lighting, ventilation and sewering which should not be overlooked. Hence from a social and civic point of view the skyscraper is undesirable. Yet the success with which it has been treated in America demonstrates that there can be no objection to it from a purely æsthetic point of view, provided the site is rectangular, for on our irregular-shaped sites skyscrapers would be abortions—as they are in the old part of New York. Nevertheless the architecture of the skyscraper is fraudulent. It does not express the construction but is a mask skillfully designed to conceal the construction. And as such, while it is a testimony to the skill of American architects, it at the same time gives expression to the fundamental contradictions that underlie modern civilization.

Considerations of this kind suggest that in spite of apparent success the life of this American architecture is precarious. It is certain that the economic conditions that have brought it into existence do not possess within themselves the elements of permanence. For there is a limit to the economic development which has provided such opportunities and many things I have heard while in New York lead me to suppose that the limit has just about been reached. To understand exactly why this is so would involve me in an elaborate economic analysis

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which is outside the scope of these articles. But it must be apparent to the most superficial observer that a time comes when the increase of ground values reaches a point at which no margin is left for even decent building, much less for decent architectural effect. And indeed this is already the case over the greater part of New York, where rents are so high that the problem is to find room to live. Mr. Lewis Mumford's article on *The Imperial Age in American Architecture*[1] should bring home to us a sense of the rotten foundation on which it all is built. For as he wisely remarks, "the same process that creates an unearned increment for the landlords who possess favored sites contributes a generous quota—which might be called the unearned excrement—of depression, overcrowding, and bad living in the dormitory districts of the city. . . . Historically the imperial monument and the slum tenement go hand in hand."

The American Skyscraper

But there is another way of looking at this phenomenon. We may regard this new American architecture as the expression of the skyscraper, or we may regard the architecture and the skyscraper as things fundamentally different in their nature, which, though acknowledging different starting points and moving towards different goals, have for the time being become accidentally associated. This I believe to be the true interpretation. And I am confirmed in this belief by the fact that the tendency of design in the more recent skyscrapers is towards standards that are distinctly mediæval. This may be partly explained by the fact that the new zoning law is leading to the substitution of the parapet for the cornice. But the main cause, it seems to me, is that American architects are through with the Renaissance. For many years they experimented with the Classic orders, combining them first this way and then that, either structurally supporting entablatures that did real work or decoratively using the orders as mere surface ornamentation. But there is a limit to the number of possible combinations; for the Classic and Renaissance permit variety only within well-defined limits. And because of this the possibilities tend to become exhausted. This I imagine is the reason why in the more recent buildings the design is Pre-Palladian (or Pre-Vitruvian—whichever we prefer to call it). The types of design nowadays in favor are either that of the early Italian Renaissance—the romantic Renaissance that came before Palladio put architecture into a strait-jacket—or Italian Gothic, or Romanesque. Taste nowadays moves between these closely allied styles, which are being handled with an extraordinary degree of skill. It is a development which, I feel, has a great future before it. For American architects, having turned their backs upon the academic Renaissance, are coming to breathe the freer atmosphere of mediæval tradition and inspiration. Their work today gives the lie to the theory so popular in this country that Gothic architecture cannot be adapted to modern use. It is entirely a question of knowing how, and the Americans have discovered it. If Gothic architecture can be adapted to the skyscraper it can be adapted to anything.

Coming to details, the Woolworth Building, which is the highest building in New York and the first skyscraper with any architectural merits exhibiting a vertical treatment of design. In general conception it is rather fine, but its detail is too reminiscent of the debased Gothic of the *Hôtels de Ville* of Belgium to bear looking into. Its treatment is exceptional and though Gothic it has nothing in common with the more recent Gothic skyscrapers apart from the fact of its vertical treatment. But generally speaking a distinct preference is shown for a horizontal treatment on a Renaissance basis. In the more recent skyscrapers it is usual to divide the elevation into three parts. The lowest one, which forms the base, and consists of three stories, is built in stone. The upper part, which consists of the top stories of the main façade and the stories set back to conform with the requirements of the new zoning law which limits the height of buildings, is in brick and stone, and perhaps enriched with pilasters; while the intermediate stories are executed in a yellow-brown brick and kept perfectly plain. The general effect is very fine indeed, and in the best building the details are equally interesting. There are several hotels and apartment houses in the vicinity of the Grand Central Station designed in this way, several of them by Messrs. Warren and Wetmore.

The Fraternity Clubs Building, by Messrs. Murgatroyd and Ogden, is a recent example of the vertical treatment of a skyscraper designed to meet the requirements of the new zoning law. It suggests a tower with big square turrets at the angles and is very effective. It is in a red brick with red sandstone and suffers from a too great uniformity in color. But on the whole it is a fine design. The Shelton Hotel, by A. L. Harmon, is similar in its general disposition of masses. The three lower stories of this building are in grey limestone and the upper part entirely in yellow-brown brick. The treatment of the three lower stories is Venetian Gothic; as a piece of detail it is perhaps the best thing in New York. But the upper part, in brick, does not exhibit anything like the same degree of skill in detail, which is a pity, for if it did it would be the best building there. A similar criticism is to be made of the Bowery Savings Bank, the lower part of which is very effective, though the upper part is, I think, spoilt by too many vertical lines. This Bank has a particularly fine banking chamber, the detail of which suggests the Romanesque. The bronze doors are excellent. The carvings over the main entrance have a Gothic and grotesque vitality and the whole building is full of the most exquisite craftsmanship.

The Precedent of Horizontal Treatment

In my opinion the most satisfactory designs were those in which a horizontal treatment is adopted, though the most interesting detail is to be found on those in which a vertical treatment is used. The adoption of a vertical treatment in such cases seems to me to be a pity, for those skyscrapers in which a horizontal treatment is used are much more impressive, and there would appear to be no particular reason for abandoning the horizontal treatment now that American architects are becoming inter-

[1] This appeared in the JOURNAL for August, 1924, and in Mr. Mumford's new book, *Sticks and Stones*.

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ested in Gothic detail. I suppose the reason for this change is that in the minds of most architects the idea of Gothic is associated with a vertical treatment of design. But in Italian Gothic a horizontal treatment is generally adopted. In most of the examples of Italian Gothic that come to my mind the treatment is horizontal. Why then should this precedent be departed from, considering that the horizontal treatment is so effective in skyscrapers?

There are nowadays a great many smaller buildings in New York which display very interesting details of a Venetian Gothic character. I would mention several buildings in Fifth Avenue; some of them are obviously alteration jobs in which two or three of the lower stories have been redone in marble. And there is the Columbia Mortgage Building in East 43rd Street which, though a small building, is to me perhaps the most satisfying building in New York. It was designed by Mr. Andrew J. Thomas.

The Antecedents of American Architecture

When we remember that the original inspiration of American architecture came from England—for it should not be forgotten that it was in England during the nineties that architecture was reborn—the question arises why since then architecture should have gone forward by such leaps and bounds in America towards a richer and fuller life, while during the corresponding period in England our inspiration should have failed. For though it may be admitted that during the last twenty years there has been a general levelling up of taste and some notable buildings produced, yet English architecture is no longer animated by that spirit of discovery and adventure that animated it in the nineties, but has steadily degenerated into a lifeless formula which no doubt is entirely satisfying to the pedants who dominate architecture in England to-day, but which gives us no hope for the future. For the success of the Renaissance in England are of the nature of those facile half-successes that lead to ultimate impotence, and Regent Street to-day may perhaps show us in what manner.

The question admits of many answers, and all of them within certain limits may be true, for the difference is not to be traced to any single cause. Thus it might be connected with the fact that in England the last twenty years has been a time of economic contraction, while in America it has been a period of economic expansion. It might be traced to our different attitude towards the Renaissance; to the fact that during the last twenty years in England pedantry in architecture has got the upper hand; to the defects of our educational system; or again to the lack of organization in architects' offices. But the thing (it seems to me) that has made the great difference is that the efforts of American architects to revive architecture have been reciprocated by the public in a way that has not been the case in England. This is a fact of primary importance, for there can be no doubt that things would have worked out very differently in England had the patronage of architecture been as discriminating as in America. For in that case very different influences would have been brought to bear upon our point of view, our educational system and internal organization. When Ruskin said that "all architecture is the expression of national life and character," he expressed a fundamental truth, for in the last analysis it is the public that decides what influences shall get the upper hand.

That the attitude of the American public towards their architecture is very different from that of the English public impressed itself much upon me. One of the first questions that Americans who did not know I was an architect usually put to me was what I thought of American architecture. When I met Dr. Cram I asked him to what he attributed the great advance in American architecture, and he replied that "architecture is encouraged in American by a spirit of rivalry in which everyone feels he must have the best." Why Americans should feel this way and Englishmen as a rule not, is not easily explained. Perhaps it is part of the temperamental difference that makes the Americans so peculiarly receptive to all new ideas, and the average Englishmen so strenuously opposed. Anyway there is no denying that a different atmosphere exists. Any new idea that comes along in America is sure of a hearing. The American public meets the innovator halfway. But in England, as we all know, such is not the case. Every new idea in this country has to struggle a long time before it is accepted, with the result that by the time it is accepted it is apt to have exhausted its vitality, and men begin to lose faith in their mission at the very moment when to hold on would have secured their triumph. I have often thought that some such loss of faith in our ideals some twenty years ago, when the crisis overtook architecture that determined its subsequent development, accounts for the failure of our inspiration. After three quarters of a century of experiment and failure we were beginning to find our way out of the morass in which architecture was lost during the 19th century, and a new style based upon the traditions of vernacular architecture was making its appearance, when suddenly reaction set in. There had been little or no public response to the new ideas except in domestic work, owing perhaps to the fact that in domestic work the influence of women, who, generally speaking, are more receptive than men in matters of taste, was able to make itself felt. And so it came to be assumed that while the new ideas had relevance to domestic work they could not be applied to city work.

Aspects of the Renaissance Revival

How erroneous is this idea is demonstrated by the fact that the kind of design that is nowadays being practised in American city work is the kind of thing I imagine the best English domestic architects would have done twenty-five years ago had they been given opportunities of doing city work. But though erroneous it was the determining factor in the situation twenty years ago when reaction set in. The profession was impressed by the fact that whereas the revival of architecture that was taking place in England had failed to exercise any influence on city work, a revival based upon the Renaissance was taking place in America that did, and failing entirely to realize the influence the revival in England had exercised in America, and the different social and economic conditions that in America had promoted the success of the

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best architects in city work, they jumped to the conclusion that if ever any influence was to be brought to bear upon city work in England the Renaissance would have to be accepted as the basis of a revival. And with that idea firmly planted in their minds they repudiated the philosophy at the back of the vernacular movement, on the assumption that in so doing they were adopting the policy that proved so successful in America. As a matter of fact as we shall see later they did nothing of the kind.

Now it is not to be denied that the advocates of the Renaissance had a certain amount of truth on their side. The vernacular movement in architecture, which was sound, had got itself mixed up with the New Art movement, which was very unsound, and reaction against its extravagances was bound to come. But reaction would probably not have taken the form it did but for another reason. The new ideas in architecture first came into being in connection with the experiments in handicraft undertaken by members of the Arts and Crafts movement, and so it came about that the idea was widely proclaimed by the architects who had taken to craftsmanship that a revival of architecture was only possible on the assumption that architects abandoned office practice and took to craftsmanship, resuming the functions of the master builder. Now, while there is a certain amount of truth in this idea, for new ideas of detail in architecture are certainly evolved from experiments in actual material and while it is perhaps true that so long as the architect works in an office a limit is put to the spread of architecture, because working on paper demands a higher power of visualization from the designer than does working in actual material, yet it is a long way from being the whole truth; for experience proves that excellent architecture can be produced by the architect working in an office. Moreover, the master builder ideal is remote from the conditions of modern practice, in the first place because there is no other way of designing large buildings, and in the next because to work in an office is for the architect an economic necessity. Hence the association of the vernacular movement with this idea gave to the movement an air of impossibilism which made reaction inevitable.

Unfortunately those who reacted against the excesses of New Art, and the impossible policy in regard to architectural practice associated with the Arts and Crafts, were no more discriminating than those who advocated it. For they not only repudiate the mistaken ideas with which the vernacular movement has become associated, but they repudiated the vigorous spirit of discovery and experiment to which not only the reawakening of the architectural sense in the modern world was due, but which at all times must be the breath of life in architecture; with the result that in their hands the Renaissance has become an instrument of architectural tyranny, the last word of which is the pedantry and ineptitudes of the Neo-Grec. The leaders in these developments are not great creators but great destroyers, and if they remain at the helm much longer they will as effectively destroy the incipient revival of architecture among us as their progenitors in the 18th century strangled the traditional architecture of their day.

The Americans did not fall into this pitfall because when they revived the Renaissance they revived it in a spirit fundamentally different from that which unfortunately accompanied its revival in England. They did not revive the Renaissance because they wanted to suppress the spirit of discovery and experiment, but because it seemed to them the most convenient starting point. This difference is very noticeable in their attitude towards the Orders. They recommended their study because they were of the opinion that to master them was a useful discipline, not because they wanted to exalt them as an inflexible standard to which all architecture should conform. They understood that pedantry was the prelude to death. In other words, the difference between the English and American attitude towards the Orders may be defined thus: that whereas among us the Orders have been exalted as the goal of architectural endeavor, American architects have accepted them as the starting point. They accept them as the first word in architecture; not as the last. And having accepted them as the first word in architecture, they naturally found that Gothic architecture was the second. For Gothic as surely follows Classic in the sequence of history as Christianity follows Paganism.

We see then that though the ascendency of the Renaissance in England to-day is due to a desire to follow the example of America, the American attitude is the very antithesis to that which obtains in England, and as a matter of fact the architects of the vernacular revival are much nearer to the American point of view than are our classicists, which I can testify to from personal experience. For whereas I felt myself perfectly at home in the architectural atmosphere of America, the English atmosphere of to-day suffocates me. They are both agreed in regarding the pedant as the enemy of architecture, and in desiring to encourage a spirit of experiment and discovery. And because of this different attitude, the course of the Renaissance revival has been entirely different in England and America. For whereas the Renaissance with us became narrower and narrower, and more and more pedantic as it proceeded, exercising an ever-increasing paralyzing influence, it has in America been a consolidating and liberating influence, the last word of which is not pedantry and the Neo-Grec, but a return to the romanticism of the early Italian Renaissance, Italian Gothic and the Romanesque.

A word about the Ecole des Beaux-Arts. American architects were until quite recently accustomed to study at the Beaux-Arts. But while they accepted the Beaux-Arts as an available source of training their attitude towards it was critical, for the standards of taste which they accepted were not based upon French architecture but upon English and Italian. This is why the Beaux-Arts training produced such different results in France and America. Nowadays the Americans have schools of their own which they regard as the best in the world, and as a consequence American students are ceasing to go to Paris to study. It is a pity the recent R.I.B.A. conference on architectural education was not held in New York. For if it had been they might have learnt things.

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One of the things that is apt to puzzle an English architect when he visits America is to see how well architecture and industrialism appear to get on together. For in England industrialism has always exhibited a spirit inimical to the very existence of the arts, while it has been accompanied by the apotheosis of mediocrity and stupidity, and therefore it has presented itself to him as an enemy to be cajoled if not to be fought. No wonder he finds it difficult to understand why it should have worked out so differently in America.

Whether such will or will not be the case in the long run remains to be seen. But there is no doubt that up to the present these strange bedfellows lie happily together, and I am disposed to connect it with the different attitude towards business that obtains in America. The Englishman is apt to consider business a regrettable necessity. As he says, he is not in business for his health but to make money, and when he has made what he considers enough he proposes to get out of it, for his ideal is that of a gentleman of leisure. The consequence of this attitude is that the Englishman frankly accepts business as a thing essentially sordid in which idealism has no place. He acquiesces because he persuades himself his acquiescence is temporary. The American on the contrary has no sympathy with this ideal of leisure. He has no idea of retiring, but hopes to remain in harness to the end, for to him business is function and connected with the idea of service, and he finds it difficult to imagine life apart from it. Of course he expects to make money. But money, he takes it, is the reward of enterprise and therefore riches are praiseworthy. The consequence of this attitude is that business in America is much more romantic and imaginative than sordid. For the American when he pursues dollars does not pursue them in the mean Gradgrind spirit so common in England, but in a large magnanimous way as part of a great game, and when he is a crook one can't help feeling that he is one much more for the love of the game he is playing than for the money he gets by his frauds; for the American is always whole-hearted. In consequence the American is not as a rule conscious of any antagonism between ideals and business such as oppresses the Englishman. And this attitude reflects itself in his attitude towards the arts. Thus the American manufacturer is not predisposed to look with suspicion upon good design. He is not, like the English manufacturer, predisposed to assume that what is good art must be bad business. On the contrary, he assumes that if it is good design it must be good business, and he believes this so firmly that in his hands it soon *becomes* good business. All he asks is that design shall accommodate itself to modern methods of production, and if it does that he is prepared to back it. It is in the same spirit that he approaches architecture. He does not look at it askance as an architect's fad, as does the average English business man, for he sees clearly that good architecture may have commercial value as advertisement, and as a creator of land values, by increasing the attractiveness of a city. For such reasons he is interested in getting the best, and will spend money upon it as freely and ungrudgingly as upon any other form of commercial enterprise. When we realize these differences, we understand why architecture is so successful in America. It is successful because American business men have realized it has commercial possibilities.

Such undoubtedly is the case. Yet it must not on this account be assumed that the American business man is a paragon of wisdom. On the contrary he appears to suffer in other respects from most of the shortcomings from which business men suffer in this country. For there is just as much confusion and mismanagement in business in America as in England. At any rate this is the impression that reading Mr. Henry Ford's autobiography leaves upon one's mind. But whatever may be the defects of the American business man, he does not suffer from the peculiar English prejudice that what is good art must necessarily be bad business, and it is this that makes the difference so far as architecture is concerned.

Meanwhile it is instructive to note how the profession in America has reciprocated the interest that was displayed by the public. When the steel-framed building came along it was an open question whether all such kinds of buildings would not pass into the hands of engineers. But the architects rose to the occasion and reorganized their offices to meet the new demand, the effect of which was incidentally to give the designer a status that enabled him to give all his attention to matters of design. To this fact the tremendous advance of American architecture is in no small measure to be attributed. Let me explain.

The Metamorphosis of the Architect

The architect as he existed during the Renaissance was a specialist in design. He was employed solely in that capacity because it was believed he had superior gifts; and then he was only employed on very expensive work. For the mass of building was designed as well as executed by builders. The architect was not worried to death with business details, because he enjoyed the coöperation of the building trades which in those days were in possession of a traditional knowledge and skill that enabled them to put a design into execution without having to refer to the architect for every detail. Down to the present day there are two or three architects in England who are employed for such purely æsthetic reasons, and who in consequence are able to devote the whole of their time to design because their clients are willing for them to delegate business details to others. But with the vast majority of the profession it is different. They have a different tradition behind them. For the profession in its present proportions did not owe its existence to a demand for architecture, but to a demand for commercial building. With the coming of the contract system, somebody was required to enforce the contract, and a new type of architect came into existence who made no pretensions to æsthetic skill, but was qualified to make plans of buildings of a kind necessary to enforce the contract. Later there came a great increase in the technical requirements of buildings, and with the growth of building regulations other duties were thrust upon him, with the result that to-day the architect has so many business and practical details to attend to of one kind and another, that even when he understands design he is not in a position to give it his individual attention, and he tends to become a jack-of-all-trades and master of none. And

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on this unsatisfactory basis the profession appears to be content to muddle along. Very few architects attempt to maintain any standard once they are successful. And as the public as a rule do not give big commissions to architects who are not already successful, it works out in practice that big buildings are generally badly done. For if under such circumstances any good work is done, it is because the architect has a ghost who can do the work. But as it is not customary in England to give to such men a recognized status, they are apt to be mere birds of passage who will take the first opportunity that presents itself of doing something else.

No doubt the same kind of thing exists in America. But it is not in offices of this kind that the buildings we admire are being done; for one of the secrets of their success is that American architects have faced the modern situation in a way that English architects have not. They have faced the fact that the architect at the present day is in an impossible position. He is expected to perform too many functions. As things stand at present an architect is expected to be a designer, a planner, a constructor, a surveyor, a valuer, a bit of a lawyer, a business man, and a host of other things at the same time. Of course nobody is proficient in all these things. But he is expected to be; and at one time or another he will be required to perform any of these functions. Most men spend the greater part of their time in doing work for which they have no special qualifications, while as often as not they are unable to get near the work which they are qualified to do. The result is that the profession suffers from a frightful confusion of function, as the great mass of the buildings for which the profession are responsible bear witness.

Such being the case, it is apparent that there can be no great improvement in architecture so long as this confusion of function exists. The American architects have organized their offices on a basis which allows every member to be a specialist in his own department. And what is equally important, they frankly recognize that the key to the whole problem of organization is to be found in the position which the designer occupies. If the designer is the principal, and has so many other duties that he cannot attend properly to matters of design, or if he is a slave without status and independence, then it follows that the design will not be well done, and confusion or incompetence at the centre will radiate outwards introducing demoralization from top to bottom. Accordingly we find that in these offices the importance of the designer is recognized. He is given a large measure of liberty and is paid a good salary. For in America designers are not a drug on the market as they are amongst us, but are able to command the highest salaries in the profession. The offices are large and it is customary to take the principal designers into partnership. An architect with whom I discussed this question had thirty assistants and five of them were partners in the firm. Their names appeared on his notepaper. An office with thirty assistants would be a very large one in England. I do not know whether one exists. But in America it is not large. Architects with fifty assistants are quite common and I heard of one with a hundred and twenty-five. There may be even larger ones; I do not know.

It is all so different from what obtains here. In England one associates good design with architects working on a small scale—on a scale sufficiently small for every building to bear the personal note of the chief—and bad design with big offices. But the example of America should prove to us conclusively that this is not necessarily so, and that the very best work can be produced in big offices when one enlightened policy is followed. Indeed the evidence seems to be conclusive that so long as modern conditions of practice exist there are distinct advantages in the offices being large. For not only do they make it possible for experts to coöperate; but by making the position of the principals perfectly secure, they are proof against those petty minded considerations that are at the root of our confusion.

To sum up: the success that has attended the revival of architecture in America should impress upon us two things. The first is the necessity of changing our attitude towards the Renaissance—to repudiate the academic point of view which identifies the idea of architecture entirely with classical and Renaissance forms, and insists upon them as a fixed and unalterable standard. And the second is to recognize that however much the volume of architectural ability could be increased, it will all avail nothing unless we can get rid of that confusion of function which favors the success of the architect who is jack-of-all-trades and master of none, since so long as such conditions exist our architectural talent must continue to run to waste as it does at present. The American policy, on the contrary, fits perfectly into the circumstances of to-day. At any rate so far as big work is concerned, for I incline to the opinion that in small work the small practitioner is likely to do best. In large work, therefore, American offices presents us with a model organization to follow. Is there no one to take a lead?

ARTHUR J. PENTY.

Paris Letter

SUMMER brings for a part of the population, the happy days of vacation and of traveling. For the others, for many others, nothing comes to change the monotonous course of everyday life and sometimes a little jealousy must creep into the hearts of these unlucky folk as they see foreign and French tourists pass by in their countrywide peregrinations. Perhaps the Administration des Beaux-Arts had in mind these vacationless people when it organized the exposition of photographs of monuments of the 16th and 17th centuries which is being held in the Pavillon de Marsan. I think that it was above all an effort to turn the footsteps of foreign visitors toward France.

In any case, a double purpose has been attained: those

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who cannot leave Paris during the summer find an incomparable collection gathered together, and those who visit Paris will discover there monuments which they never go to see. For, after all, this business of touring has never been so superficial as in this day of speedy transportation. The truly wise are not those who disdain the automobile, but those who, after they have used it to reach a distant place, have the courage to abandon it to look patiently for all which may be seen on foot within a comparatively restricted radius.

The Exposition which I have just mentioned reveals no inconsiderable number of chateaux—both small and in the grand style—of churches, chapels, manor houses, of gateways scattered the length and breadth of France. And there we find only the finest examples of such building of the two centuries. One stands amazed before this profusion, a trifle saddened to see those monuments of which the Great War has left no trace, and even more grieved to think upon the number of buildings falling to pieces for lack of maintenance.

Quite often I ask myself whether it is the height of wisdom constantly to erect new structures and as constantly to tear down the old, or to allow them to crumble into ruins. Those who contend that ancient buildings have no liason with present-day needs in France are, I feel, gravely mistaken. In this country we have many very ancient houses which have been easily modernized, and which are perfectly hygienic.

What creates the general impression that these old habitations are unhealthy is that, in most cases, additions have been erected in the surrounding courts and gardens, where they have been placed with the sole thought of utilizing as much ground space as possible. The reason for these transformations is more often than not the fact that the section of the city so built up has become commercial or industrial.

At this point we come upon that primordial question of city-planning: Zoning. If Zoning can achieve the results hoped for, the residential parts of the city will retain their value for an almost indefinite period of time. This will effect an economic saving of considerable magnitude in behalf of humanity. In fact it is certain that if all houses which are sanitary and sufficiently habitable—built within the last five hundred years (and a 500-year-old house is not necessarily superannuated)—were still in existence those homeless beings who walk the streets today would not be obliged to struggle against the present crisis in housing. For, after all, there are not so many of us humans upon the earth.

I have calculated that if the 1,700,000,000 humans who form the terrestrial population of the world were congregated in a super-city whose density equalled that of Paris, this monstrus honeycomb would extend outward in a circle for not more than seventy-five miles! It gives us pause—that thought! (even granting that the rapidity of increase of the population tends to diminish with the onflow of civilization). It makes one see that it is useless to envisage limits too great for the expansion of our metropolises, even considering the phenomenon which is so rapidly draining the rural population.

To clarify my previsions, one might imagine that if the world's population should tend to come together into a certain number of cities, ranging from ten to twenty millions of souls, 85 such centres—of 20,000,000 each—or 170—of 10,000,000 each—would suffice. Each of these mighty assemblages would lay claim to a territory of some 960,000 square miles, the surface of all land being taken to total approximately 82,000,000 square miles, a little more than a quarter of the surface of the entire globe. The 960,000 square miles is almost three times the area of France.

This array of figures, which has no other object than to make us realize how little of the earth's surface is occupied by human habitations (and by that term we include all factories, workshops and commercial buildings), makes us recognize how foolish it is to think of an intensive exploitation of ground areas by the mad superimposition of story after story.

The housing crisis does perhaps result from the scarcity of suitable buildings, but it does not result from a scarcity of building land. It is vitally necessary thoroughly to convince ourselves of these facts in order to combat those Parisian gentlemen who call loudly for new municipal regulations allowing greater building heights.

Actually, with the thirty *mètres* (about 90 feet) maximum height now permitted and the greatly reduced areaways, which are required, it is still possible to cram a thousand persons upon a single acre, in residential districts, and in the commercial sections, as many as 5,000, or even more. Isn't that already a few too many? Those who dream of an era of skyscrapers in Paris are looking either to their own ambitions and successes, or more probably a financial benefit. But this can only be obtained through sacrificing the health and well-being of those who live and work near these tall buildings. For it is self-evident that the first 200-*mètre* (600 feet) building to be constructed will profit through admirable ventilation and light facilities; but at the same time it will take away these same elements from its neighbors. And if the skyscraper is not to become a nuisance to adjoining properties, I have estimated that it must be surrounded by a zone *non aedificandi* of a radius equal to the height of the building. But then the financial advantage resulting from the intensive use of the one building plot no longer exists, and the skyscraper project tumbles to the ground of its own weight.

However, we must conceive it wholly possible to see future cities composed of very high structures widely spaced, if we adopt the scheme of the zone *non aedificandi* of which I have spoken. But this is not what the builders who would put up these tall structures want. They would have no pity upon the neighbors of these skyscrapers. They would rear 40-story buildings upon plots bought with the understanding that the regulations would not permit more than 7 or 8 stories. It matters little to them that such structures create an even greater stagnation of circulation in the Paris streets, little it matters that the artistic quality of the city will thereby be lessened, if they are only to benefit by these operations.

Be that as it may, there is one fact to remember: building interests in Paris are demanding the privilege of erecting structures of enormous height, and I think that it is of world-wide interest that the tall building should be proscribed, just as it should be in Rome, in Venice,

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in Athens, in London, in all those cities which have been conceived upon a moderate scale of height and developed along that line. It is not that we are lacking a sense of confidence in modern tendencies. But it is not quite yet time to demolish Nôtre Dame de Paris (I feel that the figures I have previously given will prove this) to make room for new buildings.

Moreover, the cities of the future will not be founded upon the banks of rivers as were those of the past, or at the juncture of valleys, or near natural harbors. They will be built upon sites which will adequately meet their requirements and allow for their possibilities, perhaps in the middle of untilled plains. From this trend will arise a new manner of beauty. In these years of the future, when the means of transportation shall have been brought nearer and nearer perfection and man's æsthetic sense shall have been more highly developed, his dwellings will no doubt be spread out and spaced at a sufficient interval apart, and probably will reach a common level of comfort and modesty, for mankind's fortunes will have tended toward a common level of competency. In these days to come the wish I make as I view this Exposition—that the old houses of the Renaissance will even then be sheltering their quota of humanity—will be more faithfully fulfilled than in the present. And this conservation of housing quarters already erected will possibly have another and more material justification: the ever-growing difficulty of finding the needed manual labor to keep the building crafts at full strength.

When one visits the big erecting shops he is struck with the laborious work of the building trades artisans, who are forced to work continually exposed to the elements. Accidents are all too frequent, and outside of those whose injuries result seriously, scarcely passes a day that a stone-cutter or a carpenter does not suffer some scratch, bruise or prick.

The factory worker has his regular hours of toil, in warm and compartively comfortable quarters, with dressing-rooms and lavatories at his disposal, must seem very happy indeed to the young men who are choosing a profession. On the other hand, the apprenticeship period amounts to nothing, while to become a good mason, a good joiner or a good slater at least two years are necessary. The comparison between the building trades man and the office worker is even more unfavorable. The latter has hope—developed, no doubt, by the frequent doses of cinema romance—of becoming a man of affairs, who without hardship or danger (always following the favorite "movie" theme) speedily acquires a fortune.

The Chambres Syndicales of building contractors and promoters and speculators are trying to recruit apprentices; very complete courses of instruction have been prepared for them, and other advantages are offered them. If this state of affairs can come to pass in a country like France, where the traditions of the building craftsmen are so deeply rooted and where family custom unconsciously turns the young son's footsteps towards his father's trade, how then is the artisan to be drummed up in countries where these instincts are not a part of the soil? The difficulty of the future will not lie in finding men who shall be our architects, but in discovering men capable of carrying out their plans. It is a great problem, one which merits special study and thought.

G. F. Sebille.

The Secretary's Page

50. Chapter Reports. Fall is coming and we are getting back on the job once more, as is shown by the increasing number of reports that are coming to the Secretary's desk. Pittsburgh, Nebraska, Rhode Island, Georgia, Chicago, Cleveland, and the Illinois Society, have made their appearance.

Pittsburgh at its September meeting discussed at great length the establishment of an Architects' Show Room in Pittsburgh, and the matter was referred back to a committee with instructions to make definite recommendations at the next Chapter meeting. The Secretary is filled with curiosity to know just what would constitute such a show room. The new plans for the Octagon were also shown and discussed and the sense of the Chapter was similar to that of the Convention and that expressed by the Chairman of the Building Committee; to preserve the Octagon House, Out Buildings and Grounds and restore them to their original condition, any new buildings to be erected on the rest of the Institute property.

Nebraska reports its plans to send at least four representatives and an exhibit to the Sixth Regional Conference in Minneapolis. Omaha is apparently to have a city ordinance requiring all architects who desire to practice in Omaha to be registered there. The Secretary is interested and wonders what will happen if many cities, as well as states, have registration laws. He notes also, that the Electrical Contractors and the Master Plumbers are taking up the question of separate bids with the Chapter. This is growing to be a habit and it might be well, if the Secretary can offer a suggestion, for each of the Chapters who have this brought to their attention to see that their arrangements are along similar lines. Perhaps this, like the matter of contracts, should be settled nationally.

Rhode Island has just arrived with the minutes of the April and June meetings. They report the establishment of a draughtsmen's employment Bureau, to be managed by the president of a blueprinting company at his office, the Chapter providing the necessary circulars and display cards. Rhode Island is also having its troubles with irregular competitions.

Georgia is busy having its annual registration fee raised from $2.00 to $5.00. There has been increased interest in the Chapter meetings over the previous year as shown by increased attendance.

Chicago continues its active interest in all the civic developments of the city. It sets a noteworthy example to the rest of the country.

Cleveland presents a very full meeting. It has decided to move into new Chapter headquarters, which

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sound very attractive, and to invite the landscape architects to share them with the Chapter. A tentative program for the year's work was also laid out and agreed upon. Sounds very active in Cleveland.

51. SEASONAL OPERATION IN THE CONSTRUCTION INDUSTRIES. The Secretary wishes to call the attention of the architects to the pamphlet recently issued by the Department of Commerce with the above title.[1] It is a summary of the report of the investigation of a committee conducted by John M. Gries and James S. Taylor. The Secretary points with pride to the fact that the charts which make proper investigations possible were prepared by W. Stanley Parker, erstwhile Secretary of the Institute, who needs no introduction to any of us. The possibilities of speeding up construction, reducing the peaks in unemployment and general improvement in the construction industry are enormous. The Secretary most earnestly recommends to every Chapter that they write to the Division of Building and Housing, Department of Commerce, Washington, D. C., and procure copies of the report, copies of Mr. Parker's chart in blank, and then start a committee to work to see what they can do in their territory to forward this work.

52. ARCHITECTS' SMALL HOUSE SERVICE BUREAU. A very interesting query came to the office the other day from an architect in a remote part of the country, a metropolitan district, and it is worth quoting:

"Our only interest in the Architects' Small House Service Bureau started from a thought I had as a result of actual experience with small houses. Many people, and among them some of my friends, could not afford to pay for my time on small houses. Every one I have taken has been at a loss so I am refusing further work of this kind. I assume other practitioners are in the same position. However, I do agree with clients at this time, that I can secure plans from your bureau, aid them in the selection, with due consideration to all matters pertaining to their problem, let the contract, supervise the work for a definite fee, and also make revisions so that the plans will pass our building department."

53. ARCHITECTURAL FEES. The Secretary is tempted to discuss the ever vital question of fees. There has always been a great deal of misunderstanding of this matter. For some time many people thought, and some still do think, that the Institute set a mandatory fee of 6 per cent for all architectural work, and that no architect who was a member of the Institute could do work for less than that and be a reputable member. By very direct statements from the Institute officers and by the documents themselves it should have been understood that this 6 per cent fee is not mandatory or obligatory. In some parts of the country this apparent removal of a restriction has resulted in a definite lowering of architectural standards of work by indiscriminate cutting of fees. The statements in the Circular of Advice, paragraph 4,—"to compete knowingly with a fellow architect for employment on a basis of professional charges is inconsistent with the spirit of this circular," and paragraph 5,—"No duty of the architect is more exacting than such service, and the honor of the profession is involved in it. Under no circumstances should experts knowingly name prices in competition with each other," have been overlooked with the result that, due to the actions of the architects themselves, about the only point to be considered in the selection of an architect is how small will he make his fee. The work regularly goes to the lowest bidder. As the successful architect must make a living the only thing he can do is to cut the amount of service he performs for his client. So he reduces the work put on the plans, cuts his specifications, lets the contractor and the mills make the full sizes and the engineering plans, and the entire job suffers in consequence. The Secretary does not believe that another corollary of such practices also takes place, though it is a simple step. He refers to the possibility of accepting sales commissions on the materials which go into the work. The argument that one office, because of its greater size, has a much greater overhead and therefore must charge more money is a fallacious one for the small percentage of extra cost due to this greater overhead can by no argument be made to equal the enormous percentage of the total fee covered by the difference between 6 per cent and 5 per cent, 4 per cent, 3 per cent and even 2 per cent so frequently charged for a piece of work. The Secretary refers again to the many documents of the Institute, and particularly to the Schedule of Charges and Document 186 on the *Functions of the Architect.* The former states the proper minimum fee which will enable him to give the service outlined in the latter. No architect, whether he be single-handed or at the head of a large organization, can afford to neglect these two documents and the principles they promulgate unless he has lost all regard for his own future or for the future of the profession itself. And you can go about these United States and see, with half an eye, the places where the profession respects itself as a whole and the places where the blind competition for price has made it impossible for the public to receive real architectural service. And the profession itself is to blame,—on one else. If the architects in general refuse to give poor service the public won't expect it. And the public is the surest, quickest and most severe critic the architect has, for the public is not only the critic but it is the buyer of service.

EDWIN H. BROWN, *Secretary.*

[1] See page 416 of the JOURNAL for September for other details.

Industrial Relations

UNEMPLOYMENT

Some of the facts brought out in the introduction to the report of a five-year study of employment methods, needs, and agencies made public 29 September by the Russell Sage Foundation make clear that its figures on unemployment, while representing the average of the country's experience during the last two decades, are not necessarily indicative of present conditions or of the last year.

They say that "averaging good and bad years, 10 to 12 per cent of all the workers in the United States (several millions of men and women) are out of work all of the time;

"Widespread unemployment is now a constant phe-

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nomenon with far-reaching economic, social, psychological and moral bearings;

"In seeking work through certain types of commercial or fee-charging employment bureaus—particularly those dealing with unskilled and casual labor—thousands of men and women are being exploited;

"Public employment bureaus of exchanges can make a material contribution toward the solution of this and other phases of the ever-recurring problem of unemployment."

After citing the fact that each year from 1,000,000 to 6,000,000 persons are out of work for weeks and sometimes for months at a time, the introduction to the Foundation's forthcoming report says:

"There is something which we are just beginning to recognize—a resentment on the part of the workers against an industrial situation in which such insecurity and uncertainty of employment are possible. It is not only unemployment but the fear of unemployment—the knowledge that any job is uncertain and insecure, subject to the fluctuations of economic change—which is responsible for much of our present industrial unrest."

In the *New York World* of 6 October, Jeremiah Leary, Jr., has a half-page report on the unemployment situation throughout the country, with telegraphic replies to inquiries with regard to conditions in fifty cities. On the whole the current report shows an improvement in unemployment, and particularly in the building industry. A study of these current reports of Mr. Leary indicates that the idea common among architects that there is a shortage of building workers throughout the country is not absolutely correct. Certain cities report a surplus.

Whatever may be the situation in the building industry, it is astonishing to realize what an enormous economic waste is represented by the ordinary unemployment in all industries. To think that 10 or 12 per cent of all workers are constantly unemployed means that the actual money waste must run into billions per year; not to mention the social waste that is implied in such a situation.

The full report of the Sage Foundation on unemployment when it appears will unquestionably be of great interest.

Apprenticeship Training

A report by Mr. Frank Cushman, Chief of the Trade and Industrial Education Service, Federal Board for Vocational Education, issued in September, lays particular stress on this point:

"Any successful plan for apprentice training should be based upon the cooperative effort of employers, organized labor, and the public schools. Where such cooperation has not been secured the attempts to set up an effective system of apprenticeship have been largely failures. Where a group of employers decide to have their own school without regard to the interests of labor, or at least without consulting labor and attempting to secure its cooperation, trouble usually results. Where labor organizations attempt to set up a program of training for apprentices without the cooperation either of employers or of the public schools results are not what they could be with such cooperation. * * *

"As a rule, where public schools offer training without securing the interest and support of both employers and labor the program is not considered seriously."

A little further on in the report Mr. Cushman says that "while these three groups are perhaps the most important factor, there are other interests in every city which are usually ready and willing to cooperate in advancing a program of apprenticeship for the building trades. In many places architects have been the leaders," and so forth.

It seems to the Chairman of the Committee on Industrial Relations that the Government report as above quoted inadequately stresses the essential importance of the presence in any scheme of apprenticeship training of those related elements, the architect, the engineer, building material producers, etc. It has been stated in more than one city by those closely connected with the "Building Congress" movement for apprentice training that without the efforts of the architects these schemes would have long since gone to smash.

Robert D. Kohn, *Chairman.*

Public Information

Kentucky proposes to publish articles of local interest in the local press during the course of the coming winter.

Milwaukee has made a move which each Chapter of the Institute might well have undertaken and have made permanent years ago. It arranged a joint meeting between the draftsmen of the section and the Chapters and has formed an Architectural Club. There are draftsmen's clubs in different cities, but many of them have no connection with the older members of the profession. Undoubtedly, the drawing together of the older and younger men would be profitable to each group and to the profession.

Minnesota has arranged an Architectural Exhibit held in connection with the Conference of the Sixth Regional District, in Minneapolis, 10 and 11 October. The Exhibit was continued during the week which followed it. All of the Chapters of the Sixth Regional District were asked to send photographs. They ordered three thousand copies of the *Functions of the Architect,* to distribute to the public at the Exhibit. The Minneapolis Journal has definitely promised a column every Sunday for articles by the Chapter, and has also arranged to give it a page once a month in the rotogravure section for the presentation of work by the members.

Washington, D. C.: A Committee on Municipal Art in the Washington Board of Trade has been formed and the Chapter recently induced it to offer medals to architects and building owners who might erect buildings of meritorious designs. The awards are not limited to any kind of building, but are made from the general standpoint of the buildings' worth.

An important Public Information Conference was held in New York on 8 October. Representatives of the Committees on Education, Small House Service Bureau, Public Works, Judiciary, the Journal, and other activities of the Institute, were present and a comprehensive program was formulated for the coming year. It was con-

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sidered to be of special importance that each Committee or other activity of the Institue feel itself bound as a first duty to keep the Public Information Committee fully informed of all of its activities and thus furnish material which the Committee can use in addressing the public.

JOHN V. VAN PELT, *Chairman,*
126 East 59th Street, New York City.

Sixth Regional Conference

The second annual conference of the Sixth Regional division of the Institute was held at Minneapolis 10-11 October. The report of the Secretary, Mr. W. J. Brown, describes the sessions as notable in every way, and it is to be regretted that the limited space at our disposal makes it possible to do much more than chronicle the resolutions adopted, which were as follows:

THE OCTAGON HOUSE: That it is the sense of the Conference that no change be made at the Octagon property that will threaten its value as an historic monument, impair its character as the home of the American Institute of Architects or interfere with its simple and beautiful architectural distinction.

EXHIBITION—HOSPITALITY: That the Second Annual Conference of the Sixth Regional District of the American Institute of Architects wishes to thank the Minnesota Chapter for its hospitality and friendly welcome and particularly wishes to congratulate the Minnesota Chapter upon the high degree of excellence shown in the work displayed at the exhibition made possible through the Minnesota Chapter's initiative and energy.

CONTRACTS: That it is the sense of this Sixth Regional Conference that no action be taken by the individual Chapters on the approval or adoption of a revised contract form, or on forms or blanks for proposal until after the completion of pending action by the Directors and the Contract Committee of the Institute, and the presentation to the Chapters of their report and recommendation.

UNEMPLOYED DRAFTSMEN: Whereas, there are periods during which draftsmen have difficulty in obtaining positions and other periods when employers need additional assistance, be it

Resolved, that the Second Annual Conference of the Sixth District of the Institute recommends to the Institute directors the formulation of a method of registration of unemployed draftsmen and offices needing help to aid them in securing employment and to have information arising through such registration made available to all members of the Institute.

The work of the Small House Service Bureau came in for a great deal of praise, and the remarks of Professor Mann, which seemed to crystallize in the phrase "what we need today is architectural style, rather than style in architecture," provided further light on the question of Precedent. Mr. Chapman, in responding to the topic of "Advertising the architect" made the healthy suggestion that the best way to advertise the architectural profession is to give such complete and perfect service that the client is happy. Mr. Hewitt described the methods of instruction in art at Carleton College.

Competitions came in for attention, and as was the case last year, the discussion produced the same result, as will be noted in the appended resolutions:

COMPETITIONS: The Second Annual Conference of the Sixth Regional District of the A. I. A. begs to submit to the Board of Directors of the Institute the following:

Whereas, there is a great misunderstanding on the subject of competitions and whereas, it is the belief of this Conference that this misunderstanding is based on the confusion in the minds of many on the distinction between Architectural Competitions and Job-Getting Competitions involving the submission of sketches and the scramble for business, and whereas, this Conference wishes again to emphasize the importance of Locality to the advancement of the profession and the carrying out of the ideals of the Institute,

Be it Resolved, that the resolutions of the First Conference on this subject be reaffirmed in spirit, and that steps be taken leading to the clarification of the distinction between Architectural and Job-Getting competitions, the procedure as to the latter form to be placed under the authority of the local Chapter Committee, and the Competition Code of the A.I.A. to remain unchanged.

"The spirit which was made to prevail," says Mr. W. J. Brown, "before the close of this meeting was one of loyalty to the ideals and aims of the Institute, of increasing fairness and friendliness of one practitioner to another and of unselfish service to the cause of our great profession and to the communities in which we live, and of these three graces, the greatest of all, without doubt, is loyalty to the Institute, for it really comprises and embraces all the rest. If we who attend these Regional and Chapter meetings can only instil in the minds and hearts of those who do not attend, even a fractional part of our convictions and enthusiasm we will have started something which will work wonders for the Institute. In this way only can the Institute continue to accomplish the great things before it. We must submerge our petty, selfish ideas and carry on for the greatest good of the greatest number."

The Question of Precedent

Is American Architecture Plagiaristic?

THE REASONABLE question arises: How much ground is there for charging an architect with plagiarism when no historic precedent exists for the type of building he is designing?

To this it may be replied that naturally he plagiarises when he copies the work of his contemporaries. But that is an indecent practice which I for one am optimistic enough to believe is rare. On the other hand, it can hardly be stigmatized as indecent and plagiaristic if in a measure we follow those who we must recognize as our leaders. It is perfectly right and proper for the lesser lights among us to strive to gain some inspiration from the works of genius, for by so doing superior artistic ability is furnished the fullest opportunity to impress itself upon the art of the times. This is one reason why I favor the filing of selected photographs of contemporary architecture in architects' offices and the publication of monographs of the work of architects of recognized superiority. The examination and proper use of such material gives designers everywhere a standard by which to judge their own work, consequently tending to elevate

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the general level of design. Leaven of this sort will not work, however, for those who are not discriminating, hence the necessity for taste and education.

It is disagreeable to pursue this train of thought further and perhaps we should ignore ourselves and say at once that American architecture is to be judged by the most beautiful and original creations of those who make it, not merely by average productions—certainly not by productions which are contemptible. And if it be asked: Who is to judge? the answer is as always: No one of our times.

Admitted that there is no historic precedent for the plan of the type of building under consideration, which is composed to satisfy the conditions of a modern programme and may well be original with the architect, nor any historic precedent for the mode of construction—which does not happen to be architecture at all just now—the thing most strongly objected to is the external appearance of the building, the appearance and character of its ornamental details both inside and out, all of which suggest the use of precedent. In fact, the building has a style. Let us say that it is in the style of the Italian Renaissance and that it is built in Chicago—mentioning Chicago simply because there has been an effort there to be independent of precedent in this particular.

(The reader will excuse me for changing the style of this article, but I must have someone to help me continue the conversation.)

"You grant, then, that the building in question is American in every respect except as to the source from which its stylistic character is derived, and you object to its style?"

"Yes, I would like to see this building wholly American—American in plan, American in construction, American in all its details."

"It is a question of detail, chiefly details of ornament, and you would have our architects invent new forms of ornament derived from a source American. In the larger elements of composition they seem to be doing very well and usually develop satisfactory solutions for new problems as they arise. Do you like the architecture called Sullivanesque?"

"Well, yes, I think I do."

"Granting that it is ill taste to erect an Italian Renaissance building in Chicago, is it good taste to erect a Sullivanesque building in a foreign country?"

"We were talking about American architecture."

"All right, let us try to judge this Italian-appearing edifice for not appearing American. It is beautiful, is it not?"

"Yes, beautiful—but what is beauty in architecture?"

"Chiefly, I should say, character and good proportions."

"But how are character and proportions judged?"

"Character is the visible manifestation of purpose and programme, that a building seem to be what it is; and while I admit that style is not always a function of character, it is for some classes of buildings or ought to be, and I am thinking here of what Mr. Cram said about churches, colleges and domestic architecture. Let us exclude these classes of buildings then from our American style category without further argument. What about the appraisal of proportions? Proportions in architecture are derived from three sources, namely, the mode of construction; from reasoning out the requirements of the programme; finally, traditional proportions, the result of usage and generally accepted taste—precedent, if you will."

"But we are arguing in a circle, if we fall back on precedent as a guide for determining proportions appropriate to American architecture."

"I confess that I am at a loss if I am obliged to form an opinion concerning the beauty of any edifice except by making use of the universal standards, of which precedent is one. The most I can say about any building devoid of recourse to precedent is that I like it or I don't, and I am not willing to assume that what I like or don't like is a good and proper thing for the times to adopt or the reverse."

"It has been said that the development of the automobile furnishes a profitable object lesson for architects who would avoid the semblance of plagiarism."

"The analogy is not as clear as it might be, and the pitfalls in reasoning are many. The automobile—a machine—is one thing and architecture is another. As I see it the prime mover is an essential functional part of any moving vehicle and in this respect the automobile is as radically different from the horse-drawn vehicle as the locomotive is from both.

"A situation analagous to plagiarism would obtain if two independent automobile manufacturers built their cars after exactly the same design and pattern, each claiming to be original. There is a fallacy in assuming a part to be equal to the whole. It would indeed be a plagiaristic act to design a motor in the shape of a horse and hitch it to the shafts, but the 'horseless carriage' was not essentially plagiaristic—merely the first step in the development of the auto—a new thing requiring a new interpretation. Architecture is not a new thing and I do not see that any novelties are called for."

"I begin to see now where you stand. But surely you must admit that the American skyscraper is a new thing requiring a new interpretation."

"No, I do not recognize anything particularly new about it. A skyscraper is merely a tower, or a tower in effect which is equivalent to the same thing. It is none the less a tower because it is punched full of windows, though it may be the worse as one. The call is to express the construction, or at least not falsify it. I can conceive a skyscraper designed entirely in steel as a very wonderful thing if we were allowed to build it, but I am also of the opinion that one specimen only of this sort of architecture in a city would suffice. The infinite variety of the styles is what pleases me, and is, I believe, what pleases all of us; nor is that satisfaction diminished by a scholarly interpretation of them."

"But consider the case of Literature; surely there a parallel can be drawn which will be damaging to the current practice of Architecture."

"Rather than exhibiting a contrast to original literary composition it seems to me there is a measurably close correspondence between the two arts as practiced. There is nothing particularly reprehensible about the conscious imitation by one writer of the style of another, provided

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the thought, wording and combination of situations are original with him. Only let him adopt a good style as his model. I say this partly because much of the writing of the day is offensive solely because of an affectedly personal style. Is not the architectural composer compelled to devise new combinations which are the result of original thought, and even though his work be clothed in a style not strictly original with him, is there not, nevertheless, an evidence of personality which, if he be able, distinguishes his work from that of others and makes it easily recognizable?

"In one respect a writer has an advantage over an architect; he can give credit for his borrowings in a footnote or use quotation marks. Architects lack this defense of their sincerity. But first we must agree that the borrowing of a style is a plagiaristic act." N. C. CURTIS.

Jazz Architecture

The discussion about precedent has been most interesting, but chiefly, it seems to me, as a part of the aftermath of the war. There is everywhere an impatience with the old familiar forms and a very unhealthy thirst for the absolutely new. We hear the word "originality" continuously, rarely an expression of insistence upon beauty. Originality at any cost is the slogan of its partisans, and originality with them does not mean the novel solution of problems in composition and in detail while still adhering to the traditional forms, but an absolute clearing from the slate of all the experience and knowledge gained in the past. What they want is jazz architecture.

Now, I am quite willing to believe that after the experiment in Jazz, *Vers libre,* Rodinism, Futurism, Cubism, Post Impressionism, Bobbed Hair, Shimmeyism, Hip Flasks, Flapperism, etc., there will be a residuum of value, but if history teaches anything at all it is that such aberrations should not be taken seriously, and that permanent revolutions in art come about gradually and without any violent breaks with tradition.

Before this anarchy in art came upon us we were working on lines of tradition and precedent in exactly the same way as the Egyptians, Greeks, Romans, Gothic builders, Mohammedans and masters of the Renaissance did. The greatest buildings on earth, among which stand at the head the Parthenon, the Luxor Temples, the Baths of Caracalla, the Roman Basilicas, Nôtre Dame de Paris, the Vatican group, the Chateau and Park of Versailles, the Taj Mahal, all were designed along traditional lines. On the other hand, where, oh! where are the beautiful buildings wherein precedent has been discarded? The factor of highest importance in design is beauty. If there is added to this the supreme gift of originality so much the better. WILLIAM MITCHELL KENDALL.

The Question of Education

"A Bad Smattering" Discussed

WHILE THERE is much in Mr. Ferran's article, *The Teaching of Architecture in the United States,* published in the August JOURNAL, with which teachers of architecture will agree, there is one statement to which many will, doubtless, take exception. He says: "Schedules are arranged to justify advertising brochures which are very deceiving, and parents are led to think that the students will be properly trained. The result is that students will have nothing more than a bad smattering of everything."

Having completed a four-year course in architecture at Columbia University at a time when the schedule was much less satisfactory than now, having practiced for seventeen years and employed many students during that time, and having been head of a department of architecture for eleven years, I can view the results of architectural education from the threefold viewpoint of the student, the employer and the teacher.

Undoubtedly we could secure better results if all of our students could come to us better prepared. But financial considerations would keep many students from completing a four-year course following two or more years of college work, or of special preparation. In fact, many students now are unable to finance the present four-year course following directly after high school. Should it be made impossible for still more to secure architectural training? Those who can afford it can continue with advanced courses and European travel. Those who are financially unable to continue beyond the four or five years of the present school courses can take advanced work in design by locating in cities where there are ateliers giving Beaux Arts Institute problems.

Many school catalogues carefully call attention to the fact that the four-year course in architecture does not fit the graduate for practice. The work of the architectural school is considered to be a foundation only, on which the student is told he must build further and constantly. Students and parents who are misled by deceiving brochures would not be backward in advertising the fact, and no school could long continue the practice and hold its own.

Is it true that the result of the present four-year course is "nothing more than a bad smattering of everything"?

Granted that in five years we could teach more than in four years, or teach the same better. We could do even more in the ten years advocated by Mr. H. Van Buren Magonigle in his inimitable screed on the subject of teaching architecture, presented to the convention of the Institute at Nashville. But does that prove that what is taught in four years is "a bad smattering"?

On graduation from a four-year course I found that I had not been "taught architecture," but that I had been given an "architectural training" which had taught me to think, to study and to apply the results of my research, together with a foundation on which to build a structure of architectural knowledge that could be acquired only through a combination of study and experience. Study alone would not have sufficed.

As an employer of students I found that the character of the student counted for much more than the book

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knowledge he had acquired in the school. It was his ability to dig in and *find out how* to do a thing which determined his value in the office. It is not a question of how much better John, with his college education, may be than James with only office training, but of how much better John *is* with the training than he *would be* without, and how much better James would be *with* it than he is *without*. The school-trained man was generally better able to dig in and find out how than the office-trained man, who went on slowly acquired experience and often had difficulty in going beyond his experience.

Of course, it is as a teacher that I take exception to Mr. Ferran's characterization of what we teach as "a bad smattering." I am not objecting to his proposition that the Beaux Arts Institute of Design be made a superior school to which students may go for higher training. I do object to the suggestion that the present architectural schools limit the opportunites of their students to acquire as high an architectural training as may be within their capacities. I would not give a degree to a student whose capacity or whose character—and it may be the one or the other—held him below a satisfactory low limit for graduation. (There must be a low limit, but it should not be low.) But I would make it clear that the limited amount of architectural education which may be offered in a four-year course does not prepare a student for immediate architectural practice. I would have it understood that the degree, Bachelor of Science in Architecture, indicated that the holder thereof was still a bachelor, and that while he might possibly be engaged, he had not yet advanced to that stage wherein he was fully wedded to his profession.

GOLDWIN GOLDSMITH.

News from Abroad

At the last meeting of the New York Chapter some of the members recounted their experiences while holidaying in Europe. These may be said to have culminated in Professor Boring's detailed mention of the provisions made for the thirsty at the banquet tendered the delegates to the International Congress on Education, a list of vintages that brought forth audible groans from those present. Mr. Kohn likewise referred to a frugal *dejeuner* on the outskirts of Poitiers which was likewise tantalizing and full of memories of the lands that are still doing business at the old stands. Mr. Upjohn gave an interesting resumé of his studies in old churches and Mr. Stein talked about the Town Planning Conference at Amsterdam. Mr. Barber paid his profound respect to Paris and dwelt tenderly on his journey into Switzerland where the famous doctor Rollier makes little children well again at Leysin high above Montreux.

At the October meeting of the Boston Society Mr. Francis Bacon narrated his recent visit to Antioch, in response to a pressing invitation to view the recent archæological discoveries in Central Syria. Sir William Ramsey, the English archæologist, had sought assistance and Mr. Gorham Stevens of the American Academy in Rome had been able to send there Mr. Woodbridge, an American architect now studying in Athens, from whose letters Mr. Bacon read excerpts. The Antiochan group is, of course, well-known for its columned basilicas of early Christian origin. These buildings, of massive squared marble blocks, are proportioned in accord with the classic form, though in an obviously transitional state. The carvings and sculptures, partially preserving the spirit of antiquity, have a naïve vigor lacking in the later Byzantine work. A region abounding in archæological interest, as yet untouched, exists hereabouts. An excellent temple of Agustus in the Corinthian style was unearthed by this expedition; it dates from the first century B. C. There are fragments in the Doric and Ionic styles. The temple has four columns at the front and a semi-circular Doric collonade at the rear, and is ornamented with bulls' heads and other good detail. A tablet, with an inscription written by Agustus, was found, as well as a pavement of rare design and workmanship. The Augusteum was remarkably interesting, the Greek feeling of the workmanship indicating that the artists were Greek. Many of the carvings and sculpture were signed with the designers' names.

Mr. Frank A. Bourne described some of his adventures in journeying about Europe, his "primrose paths of dalliance" leading him "from Amsterdam to Herzegovina, and from duck No. 62364 of the Tour d'Argent to the hoary port of Ostium, from which the misty veil of antiquity is now being parted by the installation of an electric tram for the convenience of bathers from the Imperial City."

Dr. C. Howard Walker followed Mr. Bourne; his story seems best told in the pleasant words of Mr. Ripley, secretary of the Boston Society:

"This time, the first since the war, he went as a Sybarite and divided his time between Italy and France with one day in London—thirty-two minutes by the clock at Wembly, and a week in Winchester. Landing at Genoa from the well-beloved *Dante Alighieri*, he was immediately struck by the changed conditions under the regime of Mussolini. No more arguing with taxi drivers, no more hoards of dependents standing expectantly when leaving the hotel, no more mutual anguish for fear that you have tipped those whom you should not have tipped, and left untipped those whom you should have tipped, no more lost luggage, no more slums, dirt, counterfeit money, insects, in fact, all that made an Italian journey a picturesque, thrilling adventure no longer exists. Italy itself, however, sunny, colorful, tuneful, wineful and beautiful, still remains.

"The itinerary of the Italian trip was a succession of names that caused the mouth to water. After coffee among the roses and climbing Mezembrianthemums of the Eden, a great slithering motor car, purring softly, was engaged for the wonderful ride over the Mountains to Palma, passing through Portofino, Rapallo and the hill towns on the way. . . . Modena, Padua, Venice. . . .

"There has appeared of late in the public press, a lot of insidious propaganda about the replacing of the noble gondolas with stinking motor boats. There are, it is true, 230 motor boats on the canals, which spin around like animated flat irons tipped upside down, but they are government-owned craft, busy on affairs of state and public safety. Very few private motor boats are in commission, while the gondolas ply as of old and the boat yards are starting up again. There are no signs in Venice, or very few. The tax imposed of a lira a letter having been deemed extortionate by the frugal shop keepers, by mutual agreement, the signs are either effaced, painted

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out, or covered with canvas, until this Draconian regulation is mitigated. Otherwise, Venice is still the same, still the Queen of the Adriatic, Mother of Titian, Tintoretto, and Veronese, with her 'pavement of liquid chrysoprase and her palaces of porphyry and marble . . . glittering with sculpture bathed in molten gold.'

"The absence of signs is at times annoying, when one wishes to know which is Florian's and which is Stromboli's, though for our part this question would trouble us little and we would most devoutly thank the gods for a few minutes of either.

"Six hundred and eighty bombs fell in Venice during the war but the damage was surprisingly and providentially little. Many fell in the Grand Canal and one fell between the two flag poles on the Piazza San Marco. Happily this latter was a dud! The damage to Santa Maria della Vigna, near the Arsenal, was hellish and Santa Maria Formosa lost its ceiling and roof, but the Colleoni Statue was unharmed.

"In his English trip, the bright spot was Winchester, where is still preserved the soi-disant Round Table of King Arthur. It is a table 12 feet in diameter, it is round and very old; it was an old table in 1500. Sir Walter Raleigh was tried in front of it, but as to its being the Round Table of King Arthur, Dr. Walker felt about it as he did about the cachot in the Tyrolese castle where Richard Coeur de Lion was said to have been confined from 1192-1194 by the Emperor Henry VI. This was a vile, smelly hole about 6 feet square with a stone bench for a bed and a little slit high up in the wall where Richard could hear the Monks say mass. 'Is it possible,' said Dr. Walker, 'that a man could pass two years in such a place and have strength left to go back to England and fight King John?' 'Well,' said the custodian, 'I think he ranged about during the day time and only slept there nights.' "

Mr. Levi had come back from Brittany bringing a group of sketches in color which were cheerfully disposed in a corner of the room, but their gaiety was not to be outdone by his own as he discoursed of ships and colored sails, seaports and winding streets, making us also to see *"ici des moulins, la des pommiers, la des metairies,"* —for we went momentarily a-dreaming in the land of our dearly beloved Queen, Iseut des Blanches Mains.

Building Congress Notes

Man and the Machine

At the October meeting of the C. B. I. in New York City, Mr. Lucius R. Eastman, President of the Merchants' Association, addressed the members and guests. Briefly picturing the impressions of De Tocqueville and Harriet Martineau, who pointed out the lawlessness in our social fabric over a hundred years ago, Mr. Eastman went on to say:

"The men of the country were fearless, ready to meet the situation with a remedy fitted to it. Naturally, under such circumstances, precedent went into the scrap heap, sentimental respect for outworn laws was forgotten. We were ready to try the new methods. We were not afraid of throwing over tradition and custom which at times is only another name for law. That was the part of the spirit of lawlessness which had strong elements of strength in it properly used.

"But it was not always properly used. Like every new power it sometimes went too far and in the wrong direction.

"We have seen this in every phase of our national life, but nowhere more so than in our commercial life, until in the last fifty years we have had to face the situation and insist upon a change, particularly where the interests of the general public are concerned.

"No longer can a man be a law unto himself, whether he is the head of a railroad corporation or the head of the organization of men who operate the railroad. In pure self-defense we have had to recognize the weakness of the individualistic theory and adopt the policy which we are now living under, which we can for convenience call the regulatory or, perhaps better, the Commission form of control.

"Since the early days of our nation we have been committed in our economic affairs to the competitive system—and here too we have learned our lesson. Here also was, and still is, to some extent revealed the weaknesses due to excess individualism. Here the average business man realized the excesses to which any given trade might go under the competitive method.

"America is not the first country that developed its new resources. Europe, England were virgin countries once.

"Trade is not new—trade customs, fair and unfair, are not new.

"Trade guilds are not new.

"Change ever changing is the history of the world. And what is the difference between our age and the earlier days?

"Of the many things, I mention only one,—the machine. With the entry of that, man's life and his problems were changed over night. I venture the suggestion that from the long distance point of view of the historian the machine will be the factor that the last generations have been struggling with and not evil human nature. That, in spite of his ingenuity and cleverness, the business man has been, and is even now, a creature of the tool and machine and is dragged along by it.

"That we are still confronted with the old problems, the mastery of the material things by the spiritual. And where are we in the struggle?

"Of late years we hear much of the application of business methods to labor organizations and, more recently, to agricultural groups. Through combine and through combination power—equal power with that of the mechanical industries—and so the problem is solved.

"But that doesn't follow, for even now we find developing through force of circumstances as much as through intelligence, another situation—industry moving, so to speak, into another stage—that illustrated by the U. S. Steel Corporation, with its going back to the control of the sources of supply, then by Ford in his integration of industries, and the work of Stinnes in Germany—the perpendicular trust as against the horizontal trust. Forced to it by the power of circumstances over which no individual or group of individuals can have complete or final control.

"Only recently at Geneva M. Briand gave a hint of the underlying thought in Europe, namely, that the world is entering a new economic era, in which the various industries will fight by battalions, absorbing the individual. The new balance of power—an economic balancing of allied business groups.

"And what is the significance of all this to you? What has this to do with co-operation and the New York Building Congress?

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"First, if there is any advantage in being out in front, as having evolved as far as any one, you have that advantage. For, certainly, if I understand your organization aright, you are a good illustration of the perpendicular organization. You have integrated the whole industry and are organized for work, for service, and that is really the test of any organization, business or otherwise. If your organization doesn't help solve the problems which are problems of service, then you go down.

"You have the form. Will you create the substance? With the inheritance which is yours of courageous initiative, will you tackle your problems in the spirit of the pioneer, ignoring precedent, looking the facts straight in the face, and admitting the realities? You men know there are problems to be solved—go after them in the spirit of co-öperation and of the pioneer. If you don't solve them through co-öperation they are going to be solved through the harsher methods which nature uses in her process of evolution.

"Our energies should not be used in struggling with each other. Through real co-öperation you can acquire a knowledge of the other man's point of view—of his problem—of his needs, and then with a foundation of mutual self respect, which is part of real co-öperation, you can make progress. Progress in the work of the Building Trades rendering to the community, the public, the service that the public has a right to demand of you."

American Construction Council

The American Construction Council, at its third annual meeting in New York City, 2-3 October, was opened by President Franklin D. Roosevelt, who said that of the two avenues of service before the Council the one which contemplates an advisory contact with the construction world and the public, through very restricted activities by a skeleton organization, and an economic semi-annual review of underlying industrial conditions, by a Board comprising all elements of the industry, including the public, seems to be all that the industries and the public are yet ready for. He made this important proviso, however: that of the fourteen points enunciated at the organization meeting and reiterated at the last annual meeting, the Council is fully prepared to take up each one as the industries and the public will authorize and provide for it.

Aside from the administrative difficulties and obligations of the past fifteen months on this basis of understanding of its activities and through an arrangement with the New York Building Congress concerning the services of Mr. Dwight L. Hoopingarner, the Council, with the coöperation to be reasonably expected from all elements and through new memberships, will be in a position to function basically in its relationship with the public. The most important of the "specific problems to be specifically cared for" as they come up were discussed by the Board and considered in connection with the current "Economic Statement" to the public, not yet released for publication as this brief summary is being prepared for the JOURNAL.

A division of the session devoted to Better Buildings was presided over by the writer. "The Need for Better Quality of Construction and the Promotion of Responsibility Among All Elements Having to Do With Construction," was the first address, by Chas. G. Edwards, President-Elect of the National Association of Real Estate Boards. A paper by Wm. B. Joyce, National Surety Co., explained "Contractors' Bonds," describing the evils of unreliable contractors and brokers.

Mr. Charles F. Main, the Boston engineer, in "Duties and Responsibilities Properly Devolving on all Elements Engaged in Engineering Construction," paid a warm tribute to the architectural profession, praising it because it has done so much to improve contractural relations, and referring to the standardization of contract forms and documents. He emphasized the need for improvement in specifications of engineers and architects and discussed the impossibility of fulfilling some of their provisions, and stressing the importance of modern apprenticeship training.

Of decided interest was the meeting of the Committee on Apprenticeship and Vocational Guidance. The attendance of the "teacher" group showed the distinct importance of this problem to the public. It seemed curious that a minority of this group should still hold that teachers with sufficient latent talent and instructive ability even among craftsmen can always be found to be capable instructors without other technique than that gained from experience through their own initiative. After much discussion, the situation was happily cleared up through the adoption of a definite and satisfying program of procedure.

This was evident throughout the next morning's session on "Apprenticeship in the Building Trades," presided over by Mr. F. W. Walker, of the Associated Tile Manufacturers, who was re-elected Chairman.

Mr. Frank Cushman, Chief of the Industrial Education Service, Federal Board for Vocational Education, told of the past activities and future plans.

Dr. L. S. Hawkins, widely experienced in vocational education, compared craft conditions in different decades and showed how little progress in methods of apprentice training has been made even in the past ten years.

He described the pre-employment system, the time for which training, at the joint expense of industries and the public school system, be fixed at three months for some crafts. "Trades" must be analyzed; the period of pre-employment and the extent of proficiency to be expected at one year, two years, and three years should be definitely determined. This has not as yet been done, except in one or two crafts.

The most brilliant contribution of the session was the address of Dr. C. A. Prosser, Chairman of the Council's Special Committee on Instructional Facilities and Standards, and Director of the Dunwoody Industrial Institute of Minneapolis, on "The Necessity for Proper and Adequate Teaching Material in the Training of Apprentices." In the Building Trades, those least affected by the machine, we are today not training enough young men to take the place of 25 per cent of the death-rate alone, to say nothing of those who retire from old age, accident, etc. The employer selects the recruit, controls him and the whole situation. Apprenticeship training will succeed only when employers are "backing the whole program" in a definite way. He told of certain manufacturers in Minneapolis, deplorably short of men, who arranged for courses for apprentices. An experi-

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enced "mechanic" was secured, who agreed to teach, but "job-sheets" had to be prepared and, as usual, the teacher had to be taught by analysis of actual work, which resulted in speedy improvement of conditions.

The theme which he stressed throughout was "Specific Efficiency in the Specific Job." The building industry, he stated, is an "away from the shop" industry and must be recognized as such. The changing conditions must also be given full recognition and all courses revised accordingly. Summing up, he said we are on the threshold of a new apprenticeship, in which the apprentice will be "recruited as a learner, trained as a learner, paid as a learner."

Discussion was promptly forthcoming; it needed no urging of the Chairman to bring it about. Education, employer, worker, architect—all took part. A clearing of the atmosphere resulted and on the basis of the facts presented, great results may be anticipated if the excellent apprenticeship program of the Council is made possible through the active co-operation of all those elements represented at this meeting.

D. KNICKERBACKER BOYD.

Traveling Exhibitions of Architecture

The SOUTHERN CALIFORNIA CHAPTER has prepared the following interesting account of its experiences with traveling exhibitions of architecture:

An architectural exhibition calls to mind two things: for the contributing architect, a chance to show the public the merit of his work; for those in charge of the exhibition, an endless round of details. Could the mechanical difficulties of preparing, sorting, hanging and cataloging an exhibit be obviated, the public would more often be afforded the opportunity to study contemporary architecture, and the architect, finding the undertaking less arduous, would appreciate without reservation the value of this peripatetic educational campaign.

To give stimulus to this movement and to assist those who must handle such exhibitions, a brief outline is given of the ways and means employed in the "Traveling Exhibition of the Western Chapters of the American Institute of Architects." The idea and its development originated with the Directors of the Eighth and Ninth Districts, and was put into operation by the SOUTHERN CALIFORNIA CHAPTER, which is ever on the lookout for legitimate innovations and wideawake activities of interest to its members.

To meet the popular demand, all contributions for the first exhibit were confined to photographs of residences; it is anticipated that in subsequent years different types of structures will be used. The exhibition, which first appeared in Los Angeles, at the Museum of History, Science and Art, impressed the observer at once with its unique but attractive arrangement. Instead of the usual over-abundance of miscellaneous drawings and plans, fastened to the walls in a fashion to confuse and daze visitors by its haphazard display, one saw in this case a pleasing collection of photographs of actually executed dwellings, each with its accompanying plan and an occasional detail to invite closer study. Each exhibit was uniform in size with uniform photographs, made on specially selected paper and framed attractively in redwood with buff mats. A collection of paintings of colorful interiors hanging at one end of the room cleverly demonstrated the art of decoration in the home. Here and there on the walls of the long exhibition room hung exquisite tapestries and silks, adding a delightful note of warm color to the scene, while a few fine antiques and some rare old pottery gave interesting variety to the exhibition.

The several contributing Chapters had their own particular grouping in the exhibition hall, which illustrated the individual type of architecture characteristic of special climatic conditions. Although no architect's name or other information appeared on the photographs, a number was tucked into the corner of each frame to correspond with a number in the carefully prepared catalogue, making it easy for the visitor to ascertain the name and address of the architect and the approximate cost of the dwelling when desired. The necessity of restricting the number of contributions from each Chapter, in order to keep the whole exhibition within convenient limits, proved an asset, in that it produced from the various Chapters their best and most representative work. After a most successful three weeks in Los Angeles, with a larger attendance than at any previous architectural exhibition in that city, the frames were packed up and started on their travels.

Handling this Exhibit was greatly simplified by a foresighted and carefully devised plan of action. Mimeographed programs were sent to individuals and Chapters explaining in detail the whole operation and were illustrated by photostats showing the standard form of the exhibit to be followed by all. At first this idea of standardization was not popular, but after the exhibition was hung and later when letters of appreciation poured in from visitors and from those in other cities who handled the traveling exhibition, the merit of this uniform style of presentation was heartily approved. Specially constructed crates took care of the packing of the frames and by careful attention to explicit shipping instructions and shipping dates the work of moving the exhibition from one city to another has been accomplished with remarkably little effort. Much stress should be placed on the importance of publicity, through the press and any other available medium, both prior to the hanging of the exhibit and during its presentation.

Transporting a hundred framed subjects over many thousand miles might seem on first thought like a tremendous task, but thanks to the well laid plans of the committee in charge, the Traveling Exhibit of the Western Chapters has continued its journey in perfect condition and has arrived without delay or confusion at nearly twenty cities from Denver to the Pacific Coast. The enthusiasm which has followed in its wake during this first year, and the fact that it has been idle for less than a month since February, has established the idea of an annual traveling exhibit as a permanent activity.

Solved!!

Mr. Winston Churchill recently addressed the students of the Architectural Association, and what he said is to me a conspicuous example of that sort of public help which architecture so sorely needs. We get so messed up with our own trivialities that we grow much to the IN and but little to the OUT, except as someone pulls us. For instance, listen to Mr. Churchill: "The whole char-

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acter of British Parliamentary institutions depends upon the fact that at present the House of Commons is oblong."

Isn't that a smashing criticism of the kind you would almost never get from an architect? "Our House of Commons is flanked by lobbies on either side," he went on, "and it has a gangway in the center, which constituted a considerable, but not an impassable abyss. On either side of it political opinion was ranged and grouped in more or less extreme and organized forms. The party system, indeed, depended on the shape of the House of Commons." Now we might suspect Mr. Churchill of some subtle political object, in saying these things, but on the other hand we would never, suspect any architect of having given the slightest thought as to how the shape of a building might affect government.

The only similar remark that I remember, by a politician in this country, was that of Senator Newlands. Speaking to a friend on the Capitol steps, I heard him say: "You see that originally it was intended that the White House should be visible from this point (we were, of course, looking down Pennsylvania Avenue), so that the Legislative should ever be reminded of the Executive, and vice versa. But, some architect built the Treasury Building so that it stands right in the view between Capitol and White House, and with what disastrous results? The gaze of the occupants is tragically intercepted."

For myself, I feel that Mr. Churchill was a little carried away when he spoke with some fervor of the models of cottages he had recently seen, built "of a material which only a few weeks ago would have been thought to be one of the most uncontemplated for use in building houses. These cottages were made of steel,—in factories, —stamped from sheets in exact form,—backed with timber and boarding,—with a proper air space for weather. He was assured that they would in all respects conform to the requirements of the Ministry of Health, and that they would be constructed in large numbers and considerable rapidity at a price far below the cost of existing houses."

"Oh, to be in England, now that May is here." What will the Englishman sing in about another decade, and what difference will the shape of the House of Commons make to Mr. Churchill's mind? None whatever, I think. It will remain as it was, and is, and Gretna's thousands of model brick houses will be scrapped to make way for the stamped steel,—yes, by Heavens! Mr. Churchill did call them cottages.

But even this, it now appears, is not the end. The proposal to erect stamped steel homes, evidently Lord Weir's, is capped by another even more ingenious suggestion, contained in the note which we append, recently clipped from the English press:

Lord Weir's scheme for erecting steel-frame houses is being challenged by a Rotherham ironfounder, who proposes to erect houses of cast-iron plates similar to those used in the construction of big tanks, covered with concrete and plaster.

He claims that the cost of his houses will be about half that of Lord Weir's. It is said that coffins of cast-iron found in the vaults under St. James's Church, Sheffield, showed no signs of decay after nearly a hundred years, and this is claimed as proof that the proposed houses would be durable.

The inventor declared that patterns could be standardized and duplicated at nominal cost, and that the scheme would not only solve the housing problem, but keep ironfoundries busy and provide work in kindred industries.

S. I. R.

From Our Book Shelf

Brewing and Wood-Cutting

"Before I proceed to give any directions about brewing, let me mention some of the inducements to do the thing." So wrote good old William Cobbett, in his glorious disquisition known as *Cottage Economy*. His opening phrase is part and parcel of the vigorous prose of his day, a prose which has seldom been excelled, and which owed its vitality and sparkle to the undoubted warmth which lay behind it. Cobbett is called the noblest English example of the agitator, and, parenthetically, before quitting the reference, let me commend his essay on brewing to the Friends of American Freedom! But I am reminded of him by a certain vigorous fashion in the prose of Mr. Gordon Craig[1] who now comes to tell us about wood-cutting and to give us some examples of the work of a man who dropped into the art, as one might say, from sensing certain of its possibilities in the trade of acting, stage-managing and play-producing. In such capacities he is known better than as a wood-cutter, although in the latter rôle he is very well known to the collectors.

But, before he proceeds to give any directions about wood-cutting, Mr. Craig explains the inducements it held out to him. My task, supposedly, is to explain what are the inducements for architects and draftsmen to sit down before a boxwood block with a chisel in their hand, and this is easily done by picking out a phrase from Mr. Craig's text, " * * * it is no use for you to learn to master the very few difficulties of wood-engraving, if you have nothing to say when you have mastered them * * * the main difficulty in wood-engraving is to know if you have anything to express, and to find out how long you can retain your original intention of expression." Which, being interpreted, might be taken to say this: If many architects ever attempted to cut their designs on wood-blocks, after the manner of wood-cutting, what a colossal lot of nonsense might disappear! Incidentally, there might be ample recompense in playing with the oldest reproductive process in graphics, and one might also discover new and unsuspected capacities in one's self.

There can be no nonsense in wood-cutting. You cannot be fussy, careless, tricky, or slovenly. And by tricky I mean that you cannot play tricks on yourself as you can with a pencil. The facile lead is an over-persuader. It has a facility, in a clever hand, of making one believe what one wants to believe, and only the sternest of moralists can escape its Circean sway. But the wood-block will only persuade you of one thing, and that is that if you have nothing to say you cannot get away with the fiction that you are saying something. Not even the will to believe will let the wood-block fool you. Not if you

[1] *Woodcuts and Some Words.* By Gordon Craig. London, 1924. J. M. Dent & Sons.

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have any eye for scale, mass, proportion, symmetry. Lacking these things and trying to cover up the lack by clever manipulation might cramp your judgment for a while, but in the end the wood-block would triumph. You never could resist its stark and staring truth. Either you have something to say or you haven't. Either you have said something, or you have not.

For its honorable place in art or history one need not be afraid, for it lacks neither the sanctity of age nor the nobility with which an art is invested by the names of those artists who have wooed it. It is as hallowed a thing as may be. The very greatest have loved the wood-block. With the advent of the chemical fashion of making line and half-tone plates, it fell into a certain decay, but not into obsolescence, for it is essentially the medium of the creator and not of the copyist. It has limitations, but it likewise has superb advantages. The feel of the burin as it ploughs is the feel of a new freedom. There lies the smooth surface. Nothing stands between you and the multiplicative reproduction of your thoughts, if you have any, except a not too difficult technical mastery. As a discoverer of truth, the wood-cut can hardly be excelled.

Mr. Craig gives, along with explicit guidance, cross-sections of his own experience. They run, in almost every case, as though magnetically inspired, back to the theatre which is his love. But there are moments when he rises to the mastery of words,—when he evokes a memory of the hearty wholesomeness of Cobbett,—and certainly his tale of the dealer in second-hand wood-blocks is, as Mr. Dodgson says in the preface, one of the evidences that there are still men who can write in English prose.

Draftsmanship is not to be despised, by any means. Indeed you begin your wood-cut by drawing the subject thereon. But the instant cutting begins a sort of third degree test is applied. If you essay an architectural composition, for example, you will soon learn whether or no you are fooling yourself, for, in draftsmanship on paper, many may be deceived, even the drafter.

As for Mr. Herbert Furst, who also loves woodcuts, one might dispute with him for a moment over his title.[1] He means modern, one is sure, but he retraces so much history that one suspects him of being a little timid about not saying "Modern." It is all to the good, however, and clearly and well done. I am not so much concerned over whether the earliest woodcut is Chinese, as is Lawrence Binyon (whom Mr. Furst quotes as authority), for the use of the wood block for stamping recurring patterns on textiles is undoubtedly much older than that, and the mere act of using paper, instead of a cotton fabric, does not exactly establish priority in woodcutting. Used as a purely pictorial attribute, in the modern sense of pictorial, no doubt there are earlier Eastern woodcuts than the St. Christopher which was so long heralded as it.

But Mr. Furst has a fine ripe optimism. He looks backward and sees what was, at the present to see what is, and confidently at the future because it will give us a human existence not subdivided, as at present (and thanks to the jargon of newspaperease), into every sort of "world" from "labor" to "art." Such a lot of cunning little worlds it is, each with its own smug complacency, each with its own right, titles, interests, and so on. They never get together to produce very much, and fall farther and farther apart as they retire into their little dungeons of pouting and sulking at—well, not being understood, I take it, for they go out and beg, borrow or steal some publicity, if they can (they have been known to hire and pay for it, though not often), and thus they imitate those who frankly go after the real stuff.

I admire Mr. Furst's optimism, and I wonder whether he is right. There are signs, and also there are not. Contemplating the havoc wrought by the competitive price system, and the division of labor, one might be excused for wondering whether the throw-back would be so easy. One thing is certain—if people generally are thrown back upon their own resources and are obliged, as they are beginning to be, to depend upon their own industrial effort for the getting of any decent thing, from a loaf of bread to a harp to play on, we shall be getting art galore—far more than all the "artists" of the world together could produce in a thousand years, even if they were coddled and appreciated and papped and suckled until they had enough of it.

It's Mr. Furst who sets these thoughts going, in the stimulating introduction to his book, and he keeps them going a good deal as I turn the leaves and note, for example, when the woodcut as an integral part of the composed page—for books were, in one day long ago, printed from blocks on which each page of text and illustration was cut—became a little isolated, perhaps largely by the discovery of movable type, and finally was displaced altogether by the camera and the chemist. And it is also certain that there is a deep rebellion today against the half-tone. It has grown stale, and yet it has been so terrifically capitalized in the publishing game, that only a few have dared even to think of getting rid of it.

But turning the fascinating pages of *The Modern Woodcut,* I can only repeat: The woodcut is worthy of the most serious study by architects, for its successful execution demands a brilliant response to art's imperative demand—"leave it out, leave it out, leave it out."

C. H. W.

The Cathedrals of England[1]

The wealth of the material in this volume may be apprehended by a glance at the chronological index: Iona, Canterbury, Gloucester, Durham, Norwich, Hereford, Ely, Peterborough, Lincoln, Litchfield, Salisbury, Wells, York, Exeter. This is not a handbook; "it tries to show the beautiful, both actual and relative." It is a series of lectures on English gothic, and more. The brevity, succinctness and scholarly appeal address themselves without circumlocution to all men and in a most engaging way. And the volume is rich in very beautiful photographs, small, clear, and ingeniously arranged.

To this arrangement the author at once calls attention, admitting an initial difficulty for the reader until the scheme is understood. No apology is necessary, for the

[1] *The Modern Woodcut.* By Herbert Furst. 270 pp. Copiously and beautifully illustrated in color and in black and white.

[1] *The Cathedral Churches of England.* By W. B. Tuthill.

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first half-hour's reading places the reader in command of this ingenious scheme of cross-reference and instantly the work assumes an intrinsic and unusual value all its own.

An explanation of this scheme is perhaps an explanation of the book. We find six dozen or so splendid photographs arranged as to groups, chronologically: general views, west fronts, east fronts, cloisters and so forth. Finally several well-drawn plans and schedules of comparative dimensions of the great cathedrals of all the world. Turn back now and scan quickly through the text and you will find a strong feeling for comparisons and contrasts. It appears at once that the author is telling about the buildings in human terms. His references naturally fly all about England and over to France, Germany, Spain, and Portugal. It is not enough to describe; he says, "see for yourself." There is a reference to "Fig. 58" and then, for comparison, to "Fig. 35." And so, with a finger in each page, you read from a third and, reading, gain an intelligent idea of the qualities and values of the reality. In this judicious use of illustration there are two manifest advantages: the economic, for the alternative would be a great tome with constant and tiresome repetition of photographs reproduced together on a large page to open with the text; and the educational advantage by which the reader is made to do something for himself.

This means that the hand and the eye must coordinate. We all remember the detective story of intricate and absorbing plot where we follow the sleuth through shrewd deductions and thrilling adventures toward a final unravelling of the mystery, and then, just before the dénouement, finding that we have lost a thread here and explanation there, we are forced to turn back to other pages for a time, place, or action which will make the whole story consistent and real. With hair and collar tousled and fingers in seven pages we feel the thrill of being in at the finish!

Does the mystery novelist at each chapter print for us a complete synopsis of all which has gone before, and which will come after? Or do we do something ourselves? And, doing, find that the thing has come alive. To be in at the finish of a great idea, to feel the thrill of a great epoch of art; these are things which make books worth while. Great human art and great human architecture are educational and never can be dry or tiresome.

This, at least, is the feeling of the reviewer as to this volume. The human quality of the text is absorbing. An academic outline of the three great centuries of English gothic is amplified by an intense kind of observation in text and picture. We find that the essential characteristics in England were length of plan, apparent width, lowness, and variety in plan forms. True, the author is a sentimental Briton with heart as well as head. Hence he is not too academic. He cites such qualities as spaciousness, stateliness, poise, dignity, richness, virility, simplicity, majesty. He says that we of the present cannot be entirely just in our estimate of other ages because of difference in social, political, and financial conditions. There remains for us, "deduction from inert remains and scant written records." We are free to look at the buildings as they exist without being able to "read the story held in the carven stone." The quality common to all is one of "peacefulness," as brought about by the churchly and bucolic surroundings. He observes shrewdly that this unity of effect depends in part upon the neighborly location of these great cathedrals, "at relatively short distances the one from the other."

The reader must expect a quality of sublimation in the style and must look with the seeing eye for innate and predominant essentials in the photographs. Here we weigh, and appraise human values. The French cathedrals are approached by a high flight of steps and are held to be grand and imposing as compared with the low English west doors which are simple and inviting. Many of the cathedrals are epitomized,—as in the author's thoughts on Winchester—which, he says, has no emphasis and "seems to be waiting for something to happen." Canterbury touches his heart so closely that he cannot dispose of it in complete fashion and leaves us yearning to see it for ourselves.

There is scholarship here and fine and easy expression. Moreover there is a critical thoughtfulness, firm but amiable.

D. H. S.

New Members Elected

Junior Members

Thurlow Merrill Prentice, *Hartford, Conn.;* Arthur Banta Galion, *Urbana, Ill.;* Carl Emil Paulsen, *Atchison,* Claude Raymond Butcher, *Solomon, Kans.;* Columbus E. Lord, *Arlington,* William Edward Delehanty, *Southbridge, Mass.;* Carl H. Schwenkmeyer, *Ann Arbor, Mich.;* Roy Ruhnka, *Philadelphia,* Anthony Thormin, *Pittsburgh, Penna.;* George Marsh Scudder, *Sioux Falls, S. D.*

News Notes

Julian Clarence Levi, Chairman of the LeBrun Scholarship Committee, announces that the competition program will be issued about 1 January, 1925. It is open to any architect or architectural draughtsman, a citizen and resident of the United States, between 23 and 30 years of age, who has, for at least three years, been either engaged in active practice, or employed as an architectural draughtsman, not the beneficiary of any other traveling scholarship. The stipend of $1,400 must be used in a 6 months' trip to Europe. Competitors must be nominated by a member of the Institute on blanks obtainable from the Committee, Room 610, 19 West 44 St., New York City. Nominations must be received before 1 January, 1925.

Emil William Klee has removed from Evansville, Ind., to 214 S. Winebiddle Ave., S. E., Pittsburgh, Pa.

Arthur G. Tafel has moved into his new studio building at 140 S. Third St., Louisville, Ky.

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The Allied Architects Association of Los Angeles—IV



PATRIOTIC Hall, a Hall of Victory for the County of Los Angeles, is known as "Job Seven" of the Allied Architects Association of Los Angeles. It is a memorial, a practical expression of appreciation by the County to the heroes of all wars, and its purpose is to supply them with club rooms, banquet and assembly halls, an auditorium, trophy rooms, a library and complete quarters for the various organizations. Its façade indicates its use as a club and expresses its memorial character.

Good judgment and perseverence have characterized the action of the Board of Supervisors of the County in dealing with this problem. So many war memorials erected throughout the country have no lasting value because of their lack of utility. Here we find a true public benefit, a building which meets the needs of all veterans and fulfils a want of the community. Coöperation between the various military organizations, the Departments of the County and the Association has been essential. In its relations with the public the prestige and influence of the Association stand out as an all-important factor for successful dealing with clients. Confidence in the ideals of the Association, the integrity of its members and the exactness of its operations are reflected throughout its transactions. By mere force of numbers it commands respect and consideration. Its procedure, its carefully kept records and its foresighted policies appeal to wise municipal authorities. So it is possible for the Association to meet large public organizations on a common ground and confidently fight for the high principles of the profession; and, with this assurance, the meetings of members and directors frequently include, as invited guests, representatives of the County, City and Civic Associations, who discuss in "Open Forum" the development of the various projects. An important result in this continual contact is that the work of the Association grows by process of evolution instead of by convulsive action.

Patriotic Hall, now under construction, sprang from the discussions and decisions of many such conferences, so that the program was well defined when sent out to the members with the usual request for their coöperation in the form of sketches and written ideas. The exhibition of esquisses submitted and hung at the first members' meeting called for this purpose, showed a most interesting variation in type of architecture and conception of the problem in so far as the façade was concerned. The scope of design ran from a replica of the Harvard Club of New York to a Triumphant Arch of Rome, and the discussion which followed brought out the necessity for decision between three types: a memorial, a club, or a combination of the two. The answer to the question became characteristically a matter of development guided by action taken at subsequent members' meetings. When the problem was turned over to the committee charged with this project, "the Jury of Design for Patriotic Hall," it was sufficiently precised to afford tangible material for a successful solution.

The selection of the personnel of this Jury was based on a careful survey of the qualifications and personalities of the members. Perhaps an ideal Jury might include one member with the qualifications of leadership, one member with conservative ideas of design, one member of radical tendencies, and others chosen on account of ability and interest actually demonstrated in the progress of the sketches. Within certain limits, the combination of strong personalities and marked individual tendencies has proved constructive rather than destructive; sparks of dissension often have resulted in a greater brilliancy of design.

In delegating to the Jury of Design the development of drawings for this Patriotic Hall, the Board of Directors of the Association issued written instructions to the Chairman and members which included in addition to technical information the following paragraphs:

"You have been elected by the Board of Directors as a member of the Jury on Design for the above work; the duties and responsibilities of this Jury on Design will be as follows, to wit:

"That while it is inevitable that the major duties of the jury work shall fall upon the Chairman and while it is necessary that the design shall have the individuality of the Chairman behind it, nevertheless it is the duty of the other jurors, according to Association procedure, to freely and fearlessly criticize the development of the design, to offer every suggestion possible within their power, and reach, if possible, a unanimous conclusion on all matters of design, so that when your completed design is presented to the Board for its approval you will be unanimous that the presentation represents the best architectural solution of the problem that you as a jury can attain.

"To aid your Chairman in every way possible by frank criticism and discussion of all matters of design included under your scope of our work on this Hall of Victory, to the end that you may develop for this Association the highest architectural merit in the design you are set to develop.

"The members of this Jury will receive such compensation for their services as the Board can allow therefor out of the budget for this project."

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The Jury worked rapidly and faithfully. Its Chairman and Vice-Chairman, whose sketches had successfully come through the criticisms and judgment of members, were diametrically opposite in temperament —one conservative, the other aggressive. The other members of the Jury were enthusiastic and painstaking in their work, so in this, as in other service of the Association, the marked ability and special talents of its seventy members have found an opportunity for usefulness. In designing, engineering, construction, technique, and in educational work, each member has a chance to do his part to advance the art of architecture.

Current Activities

Producers' Research Council

The semi-annual meeting of the Producers' Research Council will be held Monday, 24 November, at the Hotel Cleveland, Cleveland, Ohio. Among the reports to be given will be the final report of the Executive Committee in connection with the exhibits by individual members in The Architectural and Allied Arts Exposition to be held in conjunction with the Annual Meeting of the Institute in New York City, April, 1925.

The meetings of the Producers' Research Council are open to all members of the Institute and it is hoped that a number of architects in the Cleveland Chapter will attend the meeting that some good ideas may be worked out to make the Council of more benefit to the Institute.

Obituary

Willis Polk

Died at San Francisco, Calif., 11 September, 1924

Willis Polk was truly a part of the life of San Francisco, reflecting in his character and work that subtle flavor which differentiates San Francisco from the rest of the world, and the city, in turn, owes not a little of its character to his artistic vision. The problems of its citizens gave to Willis Polk the opportunities on which his talent grew. The spirit of the city was congenial to him, for he had those same adventurous leanings which inspired the pioneers. That the conditions for the full flowering of architectural talent have been rather arid in San Francisco is perhaps true, but the vigorous quality of his art overcame many exasperating obstacles.

His character was clearly marked with the qualities which go with artistic accomplishment. He was fearless, mentally and physically, and possessed of a fighting spirit which delighted in defending his artistic convictions and what he deemed the truth with all the sharp weapons of his quick wit and withering satire. Timidity was not in his make-up and difficulties did not daunt him when he was trying to express an architectural idea. His was an intuitive mentality and his judgments were swift and positive. His mind, always alert, assimilated artistic knowledge with surprising ease and rapidity. In the drafting room, he grasped situations quickly and was always ready with ingenious and practical solutions.

His love of action and his craving to be in the midst of the life of the city led him to an intense interest in the development of the city, which revealed his breadth of vision, and his temperamental tendencies to aim at monumental and classic ideals.

Love of life in all its phases, intense love of art in its various shapes, power to reflect these emotions in tangible form, these were the characteristics of Willis Polk.

His presence was distinguished and magnetic, his appearance finely drawn and aristocratic. Generous to a fault and quixotic in temperament, he often acted to his own disadvantage. But to the ideals of the beautiful, the sincere, and *la Grande Architecture,* he was ever faithful and never spared his untiring energy and æsthetic gifts to advance those ideals.

His numberless friends are bowed in grief. San Francisco has lost one of her most distinguished and brilliant sons. Art has lost a rarely-gifted devotee.

Arthur Brown, Jr.

George A. Frederick, F. A. I. A.

Elected to Associate Membership in 1871
Elected to Fellowship in 1877
Died at Baltimore, 17 August, 1924

George A. Frederick, for two generations one of the leaders of his profession in Maryland, and designer of the present Baltimore City Hall at the age of twenty-one, was one of the founders of the Baltimore Chapter in 1868. He served many times as director until his retirement from active professional employment in 1903. He had been in ill health for years. A year ago he broke a hip in a fall and since then had been confined to bed.

Mr. Frederick designed many other buildings, which became landmarks of the older Baltimore. Much of his handiwork was destroyed by the fire of 1904. He was intrusted by the State with the restoration of the old State House at Annapolis.

Born in Baltimore, 16 December, 1842, the son of John M. and Margaret Frederick, Mr. Frederick, at sixteen, entered the office of Lind & Murdoch, leading architects of the day. Before he was twenty-one, he set up his own practice and won the competition for the design for the City Hall. He supervised construction until the building was completed. It was one of the first "fireproof" structures in America.

Among other structures designed by Mr. Frederick were the Maryland House of Correction, St. James' Catholic Church, St. Pius' Catholic Church, virtually all of the structures in Druid Hill, Patterson, Federal Hill and Riverside Parks; the Poe monument, the Wells and McComas monument, the old Abell building at Eutaw and Baltimore streets, the old Rennert Hotel on the site of the present Postoffice; the mansion now the Baltimore Club, St. Joseph's Hospital, the Marine Hospital, the old Baltimore City College and the Quaker Meeting House at Eutaw and Monument streets.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

Code of Lighting School Buildings (31f16). (*American Standard approved* 16 *June*, 1924, *by the American Engineering Standards Committee. Prepared under the joint sponsorship of the American Institute of Architects and the Illuminating Engineering Society*). This code is intended to serve not only as a guide for legislators, state and municipal departments of construction and other regulating bodies interested in the formulation of rules and regulations for the daylighting and artificial lighting of school buildings, but also as a guide to architects in planning the lighting of school buildings, and to school superintendents and other school authorities in bettering lighting conditions.

The code is divided into three parts: (1) Rules; (2) Why the fulfillment of the rules is important; (3) How to comply with the rules.

The code was prepared by a Sectional Committee consisting of the following organizations identified with the school lighting problem in one or another of its phases: American Gas Association; American Institute of Architects; American Institute of Electrical Engineers; American Medical Association; American Public Health Association; American School Hygiene Association; American Society of Safety Engineers; Eye Sight Conservation Council of America; Illuminating Engineering Society; National Association of Public School Business Officials; National Bureau of Casualty and Surety Underwriters; National Committee for the Prevention of Blindness; National Council on Schoolhouse Construction; National Education Association; National Electric Light Association; National Safety Council; United States Bureau of Education; United States Bureau of Standards; United States Public Health Service; Women's Bureau of the United States Department of Labor.

This Sectional Committee was organized by the Illuminating Engineering Society and the American Institute of Architects under the rules of procedure of the American Engineering Standards Committee.

Although the rules and recommendations of the Code are based upon what is considered the best practice of the present time it is probable that in the future modifications may become desirable as the art develops and as experience is gained in the application of the Code.

Constructive criticism, suggestions and inquiries relative to the Code of Lighting School Buildings will be welcomed and should be addressed to the Sectional Committee on School Lighting Code, American Engineering Standards Committee, 19 West 39th Street, New York City.

U. S. Government Specification for Coal-Tar Saturated Rag Felt for Roofing and Waterproofing (12a22). (*Circular of the Bureau of Standards No.* 156. *Federal Specifications Board, Specification No.* 81.) This specification was prepared by the technical committee on bituminous roofing and waterproofing materials of the Federal Specifications Board. In its preparation careful consideration was given to suggestions received from the producers of roofing and waterproofing materials, roofing and waterproofing contractors, and large users of these materials.

The specification covers cotton-rag roofing felt impregnated with coal-tar saturating compounds. This felt is intended for use with Coal-Tar Pitch for Roofing (Federal Specifications Board Specification No. 80, Bureau of Standards Circular No. 000) in the construction of 3-, 4- and 5-ply coal-tar, built-up roofing surfaced with mineral matter, and with Coal-Tar Pitch for Waterproofing and Dampproofing (Federal Specifications Board Specification No. 83, Bureau of Standards Circular No. 000) in the construction of membrane waterproofing.

The requirements of the saturated felt are given as well as methods for the sampling and testing of deliveries. The requirements are as follows:

(a) *Appearance*—The material shall be free from visible external defects and shall be uniform throughout. When unrolled at temperatures between 50 and 90 degrees F. it shall not stick to such an extent as to cause tearing.

(b) *Width*—32 or 36 inches ± one-fourth inch.

(c) *Gross Weight of Roll*—50 to 80 pounds.

(d) *Weight of Wrapping, Packing, etc., per Roll*—Maximum, one-half pound.

(e) *Weight per* 100 *Square Feet, Exclusive of Packing, etc.*—14 pounds ± 1 pound.

(f) *Pliability at* 77 *degrees F.*—The material shall not crack on bending flat through an arc of 180 degrees over a one-sixteenth-inch mandrel.

(g) *Average Breaking Strength*—With fiber grain, 30 pounds; across fiber grain, 15 pounds.

(h) *Thickness of Desaturated Felt*—Minimum, 0.025 inch.

(i) *Ash of Desaturated Felt*—Maximum, 8 per cent.

(j) *Packing and Labeling*—The felt shall be properly wrapped and labeled with the manufacturer's name, brand, grade, weight, area of roll, and type of saturant.

U. S. Government Specifications for Asphalt-Saturated Rag Felt for Roofing and Waterproofing (12a21). (*Circular of the Bureau of Standards, No.* 161. *Federal Specifications Board Specification No.* 86.) This specification was prepared by the technical committee on bituminous roofing and waterproofing materials of the Federal Specifications Board. In its preparation careful consideration was given to the suggestions received from the producers of roofing and waterproofing materials, roofing and waterproofing contractors, and large users of these materials.

The specification covers cotton-rag roofing felt impregnated with asphaltic-saturating compounds. This felt is intended for use with asphalt for mineral-surfaced roofing (Federal Specifications Board Specification No. 84, Bureau of Standards Circular No. 000) in the construction of asphalt built up roofing and with Asphalt for Waterproofing and Damp-proofing (Federal Specifications Board Specification No. 83, Bureau of Standards Circular No. 160) in the construction of membrane waterproofing.

The requirements of the saturated felt are given as well as methods for the sampling and testing of deliveries. The general requirements are:

(a) *Appearance*—The material shall be free from visible external defects and shall be uniform throughout. When unrolled at temperatures between 50 and 90 degrees F. it shall not stick to such an extent as to cause tearing.

(b) *Width*—32 or 36 inches ± one-fourth inch.

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(c) *Gross Weight of Roll*—50 to 80 pounds.

(d) *Weight of Wrappings, Packing, etc., per Roll*—Maximum, one-half pound.

(e) *Weight per 100 Square Feet, Exclusive of Packing, etc.*—14 pounds ± one pound.

(f) *Pliability at 77 degrees F.*—The material shall not crack on bending flat through an arc of 180 degrees over a one-sixteenth-inch mandrel.

(g) *Average Breaking Strength*—With fiber grain, 30 pounds; across fiber grain, 15 pounds.

(h) *Loss on Heating at 221 degrees F. for Five Hours*—Maximum, 4 per cent.

(i) *Weight per 100 Square Feet of Moisture-Free Desaturated Felt*—Minimum, 5.2 pounds.

(j) *Weight per 100 Square Feet of Saturant*—Minimum, 1.4 times the weight of the moisture-free felt per 100 Square Feet.

(k) *Weight per 100 Square Feet of Comminuted Surfacing*—Maximum, one pound.

(l) *Ash of Desaturated Felt*—Maximum, 8 per cent.

(m) *Packing and Labeling*—The felt shall be properly wrapped and labeled with the manufacturer's name, brand, grade, weight, area of roll and type of saturant.

Safety Code for Laundries (35d). The American Engineering Standards Committee has approved a Tentative American Safety Code for Laundries. The code, which was formulated by a sectional committee under the joint sponsorship of the Association of Government Labor Officials, the Laundryowners National Association and the National Association of Mutual Casualty Companies, is being published by the U. S. Department of Labor.

The first part of the code provides for the guarding of machinery at the point of operation, and includes machines for washing, starching and drying, finishing, and miscellaneous machines and equipment. The second part consists of operating rules, and includes mechanical arrangements in operation and general rules. The third part deals with the guarding of machines other than those at the point of operation. The fourth part consists of a discussion and explanation of the rules.

The sectional committee which formulated the code contains twenty members, representing thirteen national organizations. These included manufacturers of machinery, employers, employees (through the U. S. Department of Labor), State regulatory officials and insurance organizations.

Emissivity of Paints (25c). (*Technologic Paper of the Bureau of Standards No. 254. By W. W. Coblentz and C. W. Hughes. 16 Pages. Size, 7" x 10".*) This paper describes experiments conducted in quest of a means for decreasing or increasing the rate of thermal radiation from heated surfaces.

Data are given on the emissivity (rate of emission of heat) of sheet iron, cotton duck, roofing material, etc., covered with metallic and non-metallic paints. Metallic paints, such as aluminum and bronze paints, contain flakes of metal. Non-metallic paints, such as white lead, zinc oxide, chromium oxide, enamels, etc., do not contain flakes of metal.

The process of heat transfer by conduction through a solid medium—for example, the walls of a steam radiator—is a molecular vibration. At the surface, part of this heat is transferred by thermal conduction to the surrounding air, which thus becomes heated, and, by convection, is distributed throughout the room. Part of this heat, which is conducted through the metal in the form of molecular vibration, is transferred into an ethereal vibration at the surface, and is transmitted as thermal radiation or "radiant heat."

As a general principle clean, bright surfaces of all metals and paints of metal flakes, decrease the intensity of thermal radiation (are poor radiators—that is, have low emissivity), while the non-metals, or paints of non-metals (oxides, oxidized metal surfaces, etc.), facilitate or increase the rate of heat radiation—that is, have high emissivity.

At the relatively low temperatures which obtain in roofs, awnings, and steam radiators (30 degres to 100 degrees C.), heat radiation is of invisible long wave lengths, and hence the color of the paint is no indication of its emissive properties. White lead paint, for example, has as high an emissivity as lamp black paint.

Emissivity of Aluminum Coated Roofing Materials. In cases where the under side of a metal roof is bright and free from oxide—as, for example, sheet metal covered with zinc or tin—no gain is to be expected in shielding the interior of the structure from heat radiation by applying a coat of aluminum paint to the under side of the roof. In this case the greatest reduction of heating of the interior will be obtained by covering the outside with white paint or asbestos.

A cypress shingle one-half inch in thickness, having a coating of aluminum paint on the under side, emitted only 43 per cent as much heat (from the under side) as an uncoated shingle of the same thickness. Similar tests on a one-inch cypress board showed practically no difference in emissivity. Evidently in thick coverings of wood the question of painting is unimportant, owing to the poor conductivity of wood.

Thin sheet iron covered on both sides with impregnated asbestos if painted with aluminum paint on the under side transmits only about one-half as much heat as the unpainted material. The same material painted both sides with aluminum paint was not so efficient. Painting the outside surface only materially increased the amount of heat transmitted to the interior.

Means for Increasing the Heat Dissipation of Radiators. From the viewpoint of obtaining the maximum amount of heat from a radiator of a given size aluminum or bronze paints are the most inefficient materials that can be applied. Since, however, the ordinary steam radiator is so constructed that the room is heated more by thermal conduction and convection of the air which circulates over and between the sections of the radiator than by radiation, the heat loss due to the use of aluminum and bronze paint is not so great as is sometimes claimed.

The form and design of a radiator has an important bearing on the relative amount of heat transmitted to the room by convection and by radiation, and consequently materially affects the amount of heat loss due to the use of aluminum and bronze paints. For example, with a wall coil or single-tube radiator about half of the heat is given off by convection and half by radiation. The use of aluminum or bronze paint reduces the radiant efficiency by about 50 per cent, though loss in efficiency is only about 25 per cent. On the other hand, a four-column radiator gives off about 75 per cent of its heat by convection and about 25 per cent by radiation, and the total loss in efficiency due to the use of aluminum or bronze paint is from 10 to 15 per cent. The increase in efficiency, in ordinary heating practice, due to the use of such non-metallic paints as white lead, zinc and chromium oxide, and enamels varies from 10 to 25 per cent, according to the type of radiator used.

Owing to the fact that aluminum paint, which has a high thermal conductivity, becomes simply part of the metal wall of the radiator, it is unnecessary to remove the old coat of aluminum paint before applying the non-metallic paint.

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THE JOURNAL OF THE
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Ad Deam Decimam

IN PRAISE OF ARCHITECTURE

And of Icktinus, that builded the mayden temple, it is told that the Muses shewed themselves to him and bade him to choose of them her that he would have for his mistress, and he chose her that was eldest, for that she was fayrest as well.

To each comes the day of his choosing when, clear from the height,
The kingdoms of Earth and their glory lie spread in his sight,
His to rate, and appraise, and make choice of, to turn from and scorn,
Till he sees there and claims his own heirship to which he was born.
Some Cyprus, some Athos, some Ophir, some Athens have claimed;
Or languorous islands in oceans remote and un-named;
Strait Ithaca, Tyre of the galleys, broad manors of Spain,
Sabine acres, Arcadian meadows, the slopes of Avernus, Cockayne.
Unhappy who, dull or fainthearted, debate and delay!
While they palter, the vision has faded in glamor away.
Regretful, reluctant, alone to the plain they descend,
As serfs in another's dominion to wear out their lives to the end.
But blest whom Earth's kingdom contents not, who see but disdain,
Choosing rather immortals to serve than o'er mortals to reign.
Their rule shall be only the wider for all they resign;
No landmarks shall fence and restrain them, no bounds shall confine.
The servants of those who themselves hold unlimited sway,
They are free of all climes and all cities, thrice gifted are they!
But none may aspire to that service until they be tried.
Having chosen, then let them beware that they turn not aside,
But snatch up their staves and make ready to gird them in haste.

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Their way lies by heath, fen, and torrent, by desert, by moorland, by waste.
For afar are the haunts of the Muses; the sound of our strife
Never vexes their ears, never troubles their exquisite life.
But aloft, in the lap of tall mountains, caught up to the skies,
Amid rock-ribbed and cliff-circled meadows, their palaces rise.
White walls that gleam golden in sunshine, slim columns a-row,
Broad eaves dripping violet shadow on marbles below,
Deep courtyard, high casement, wide portal, slow ramps that descend,
From terrace, to terrace, to gardens that stretch without end.
With the joy that is kept for the simple their long days are filled.
The dance is not stayed in their presence, the song is not stilled.
From the dawn, when in dew-dappled orchards they gather their yield,
Till, linked-hands and blithe in the twilight, they wander afield.
There rarely some shepherd, benighted, bemazed, and astray,
Has seen them far off in the meadow, and marked them at play,
Until, without haste, to conceal them at length from his sight,
Like the veil of a temple his presence had all but profaned, fell the night.

I had seen; I had weighed; I had chosen; my choice was declared.
I had sprung from the mount; I had threaded the ploughlands and fared
Through the outlying pastures, and, plunging waist deep in the ford,
Met the thrust and the tug of the stream, felt its chill as it poured
Past my thighs, flowing fresh from the snowfields that, cold in the sun,
Lay like gauze on the misty grey summits. My course was begun.
Then the thickets!—the alders, the aspen, the willow, the thorn.
Then the fallows!—the broom and the bracken, the heather, the thistle forlorn.
So I won to the rim of the valley. Behind me the rays
Of the still-lusty sun lit the cornland, and riddled the haze
That already rose over the river; before me the shades
Of the forest lay light on the hilltops, and deep in the gloom of the glades.
Then doubt and foreboding assailed me. I pondered. I feared.
Took grip of my cudgel more firmly. Strode slowly and peered
Down the grassy aisles stretching before me that wandered between
The treetrunks, to vanish in tunnels and caverns of green.
They were empty. And yet, from the fringe of the forest in hiding,
Were not eyes on me, watching and mocking?—hushed laughter deriding?
Flung flat in the thickets, or crouched where the boughs met the ground,
Did not shaggy forms lurk in and people the hollows around?
And that sound! 'Twas the arrogant snarl of the lynxes that follow,
And the clash of the cymbals that herald the car of Apollo;
The whining of pipes from afar, and the chant of young voices,
That quicken the coverts with song when the forest rejoices.

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Song

The forest is silent.
The treetops are still.
Motionless laurels
Wait on the hill.
The hesitant breeze
Is holding its breath,
And even the bees
Have muffled their humming.
All's quiet as death.
Hush! She is coming!

The forest awakes.
The branches are leaping.
Their cool fragrant petals
The laurels are heaping
In drifts on the ground.
The breeze is upspringing
And on it the sound
Comes sudden and clear
Of joyful birds singing.
Be glad! She is here!

I trembled, and yet was at peace. After moments unreckoned
White figures moved forth from the shadows. Arms pointed and beckoned.
As the veil of the cedars and cypresses wove itself o'er me,
Of a sudden, benign, arms extended, the Muse stood before me.
(Do I see her again as I speak, with her maidens attendant?
No—the slim clustered trunks of the birches, the sun on their foliage resplendent.)

"I have hastened," she said, "from the summits that tower on high,
Down the perilous passes and slopes rising steep to the sky,
Since I saw you set forth on that quest, by so many begun,—
Which is ended in triumph by few, without peril by none,—
To warn you again of the labors your fate is to meet
Ere the last panting effort shall bring you at length to my feet,
And this to fortell for your comfort; that welcomed indeed
Is the mortal who seeks me; my favor shall wait on his need.
Not in gold, nor in ease, nor in power his guerdon shall be,
But the joy that enkindles, the knowledge that calms and sets free,
The peace that enfolds and the purpose that tempers the will,
The mind that is quick to conceive, and the hand that is sure to fulfil.

"The fruit of his thought shall be clean in its bud and unfolding.
No taint of the earth may intrude to defile in beholding.
No grave men shall say (and be sad) in recounting his story,
'He has flung in the face of the Giver the gift that was meant for His glory.'

"The cities shall rise to a pattern foretold in his dream.
From hearths that were built to his bidding the firelight shall gleam.
As he bids them, homes ordered and gracious the secret shall tell
That our day has forgotten, how Beauty and Dignity dwell.
In their porches young lovers shall linger, fair brides shall delay;
They shall ring with the cry of the newborn, the laughter of children at play.
The pageant of life to the end in their walls shall unfold,
And the end shall itself be made sweeter for memories fond they shall hold.

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"When plenty and peace have replenished the garner and store,
The ancients who govern the nation shall seek out his door,
Saying, 'Build, that in ages to come when our name has departed,
The men of the future may know we were strong and freehearted.'
So, spokesman for all of his race, unto peoples unknown,
He shall hand down their fame, written largely in letters of stone.

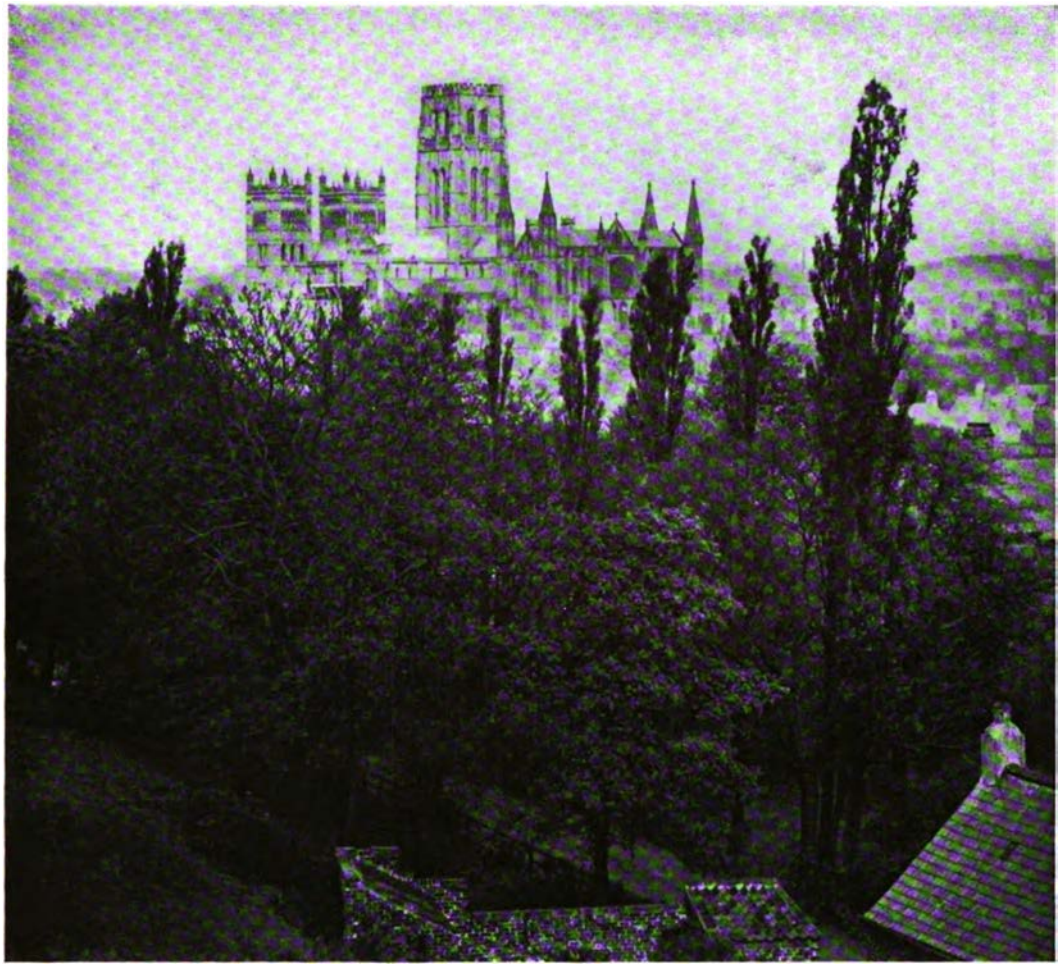
"That the dome may be raised in the square, that the shrine may be placed
By the wayside, that cloister and chapel may rise in the waste,
The rich will bestow of their bounty, the poor of their dole;
For his gift, in their walls shall be builded a part of his soul.
So, though he be heedless or slothful, with fervor increasing,
The part of his soul that is in them shall pray without ceasing.
So shall he have part with the Seraphs, who, ever before Him,
Untiring, through ages of ages, cease not to adore Him."

She spoke, and was gone—while I still knelt before her abased,
While the sunlight, still lingering, gilded the grass of the glade she had graced.

The time has been long on the trail; the reward long delayed.
Into byway, and quicksand, and bramble my footsteps have strayed.
Betrayed by false lights I have wandered, by pitfalls ensnared.
I have stumbled and risen; have doubted and gloried; have hoped and despaired.
Though much that she promised has failed me, I still struggle on
With my eyes on the summits to which she has proudly withdrawn.
O Mother and Queen of the Arts! Goddess ancient and kind!
The world has grown dull to your message, its peoples are blind.
Ever new, ever young, ever fair, in fresh garments arrayed,
In vain in the sight of the crowds are your beauties displayed.
Not so in days gone, when familiar you mingled with men,
Alike in the cottage and castle they welcomed you then;
Wherever they gathered they worshipped your presence serene,
Whether clad in the gown of a peasant, or robed as a queen.
The workmen who toil at your temple now labor in vain;
No offerings smoke on the altar, no worshippers throng to the fane.
Yet noble no less is the prize of the mortal who chooses
My mistress, the eldest, the fairest, the first of the Muses.
The pathway is faint on the ledges; the uplands are drear.
The mountain still rises above me. I must hasten. The evening is near.

FRANCIS P. SULLIVAN.

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Ely, Durham and St. Bartholomew's

After the Photographs by
Frederick H. Evans

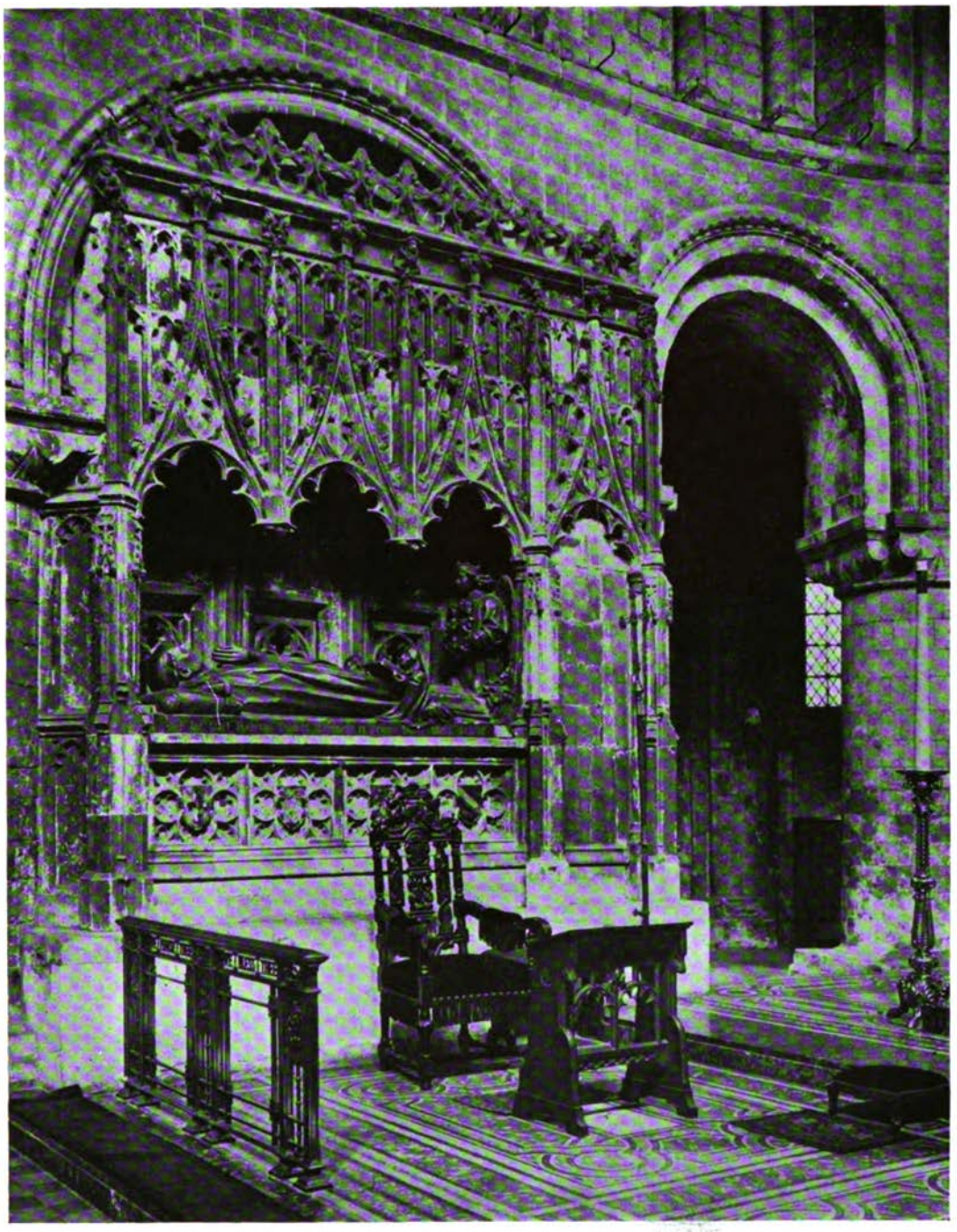
DURHAM CATHEDRAL: FROM MOUNTJOY HILL

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ELY CATHEDRAL: ENTRANCE TO BISHOP WEST'S CHAPEL
Frederick H. Evans

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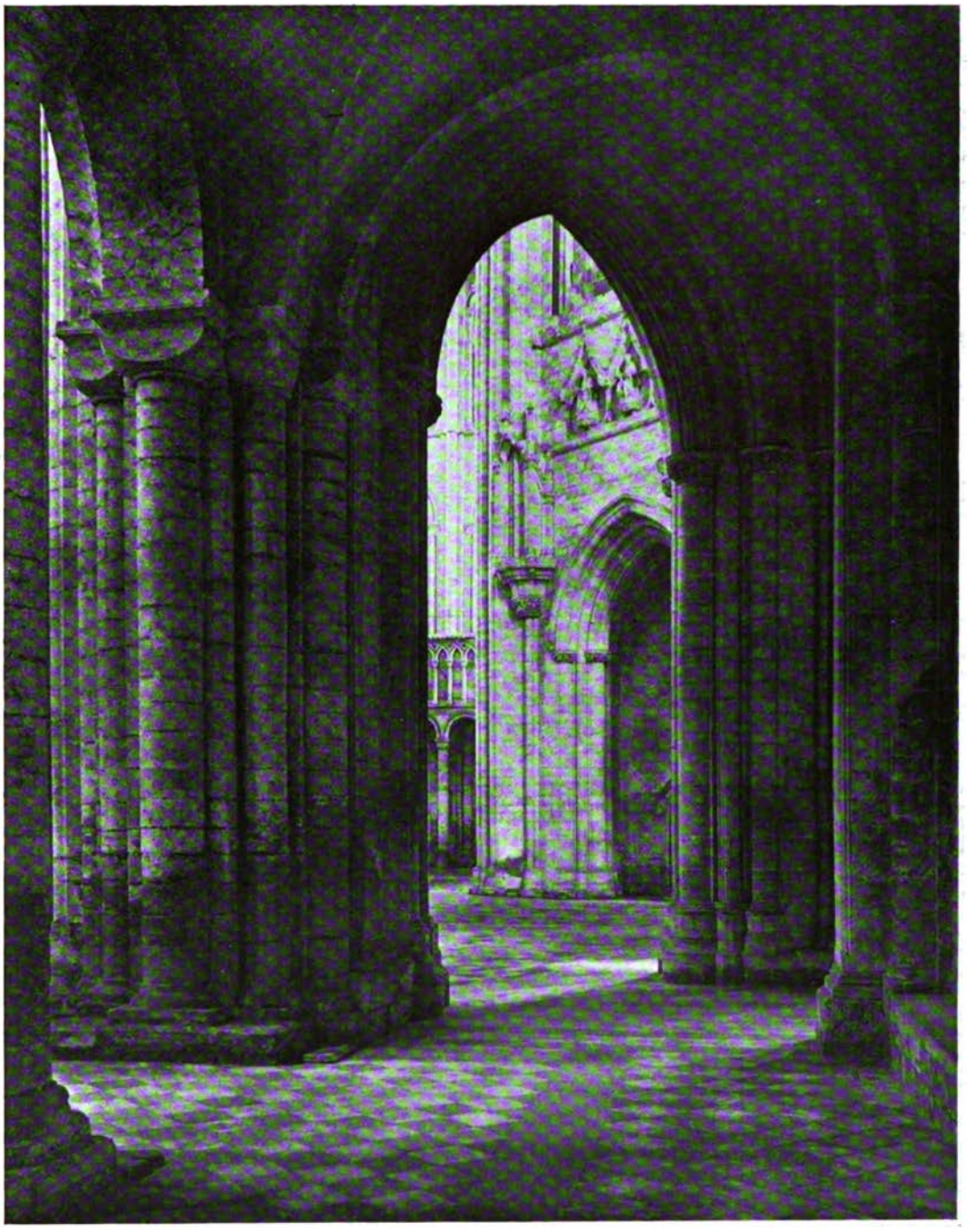
THE ROYAL PRIORY CHURCH OF ST. BARTHOLOMEW THE GREAT:
TOMB OF THE FOUNDER, PRIOR RAHERE
Frederick H. Evans

DEPARTMENT OF ARCHITECTURE
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ELY CATHEDRAL: VIEW INTO THE NAVE AISLE
Frederick H. Evans

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ELY CATHEDRAL: ACROSS THE AISLE AND OCTAGON
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THE ROYAL PRIORY CHURCH OF ST. BARTHOLOMEW THE GREAT, SMITHFIELD:
SOUTH SIDE OF THE CHOIR, TO THE WEST
Frederick H. Evans

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DURHAM CATHEDRAL: GALILEE CHAPEL AND THE VENERABLE BEDE'S TOMB
Frederick H. Evans

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THE ROYAL PRIORY CHURCH OF ST. BARTHOLOMEW THE GREAT, SMITHFIELD:
SOUTH CHOIR AISLE AND ALTAR
Frederick H. Evans

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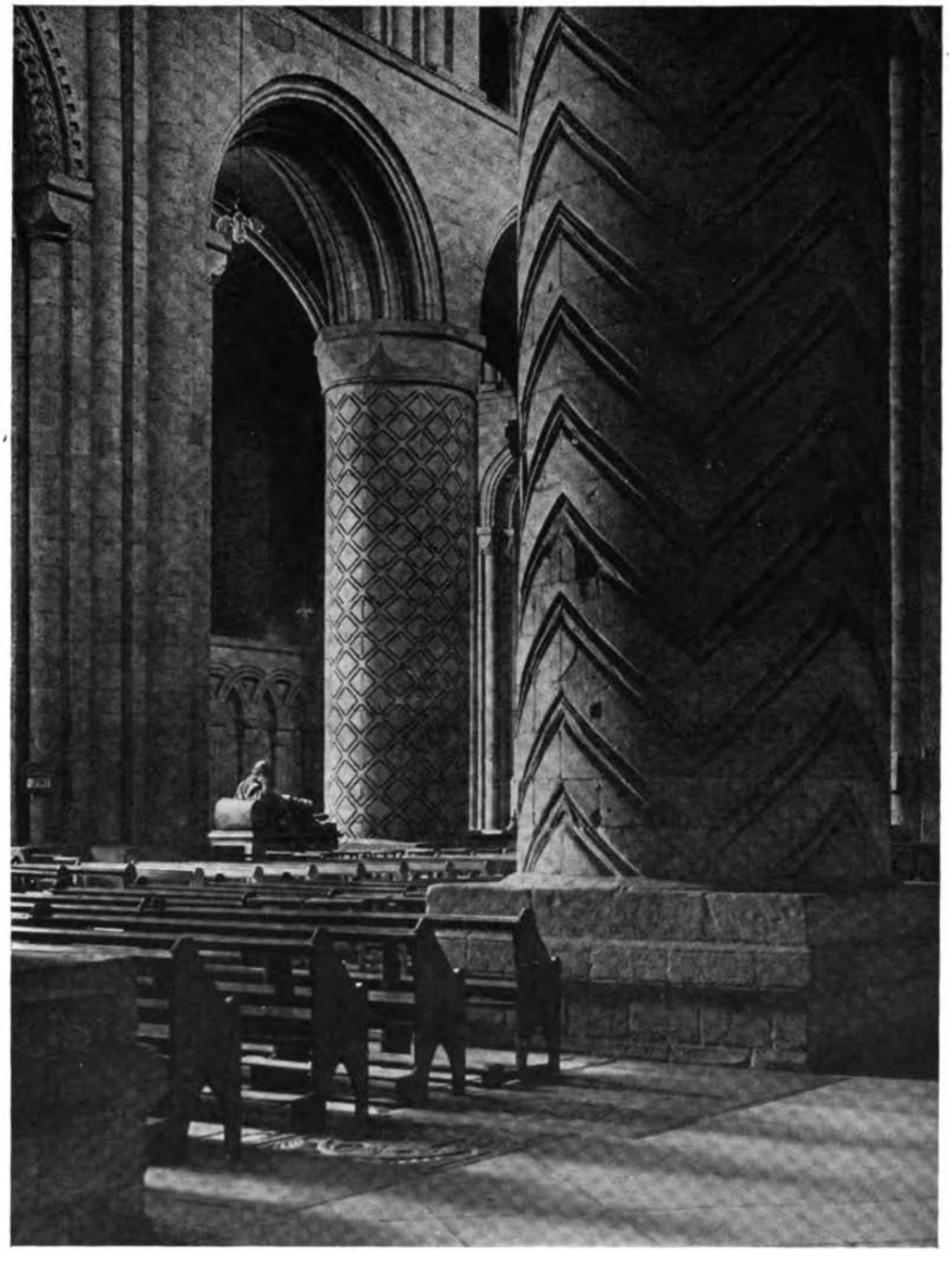
THE ROYAL PRIORY CHURCH OF ST. BARTHOLOMEW THE GREAT:
SOUTH AISLE ACROSS THE CHOIR
Frederick H. Evans

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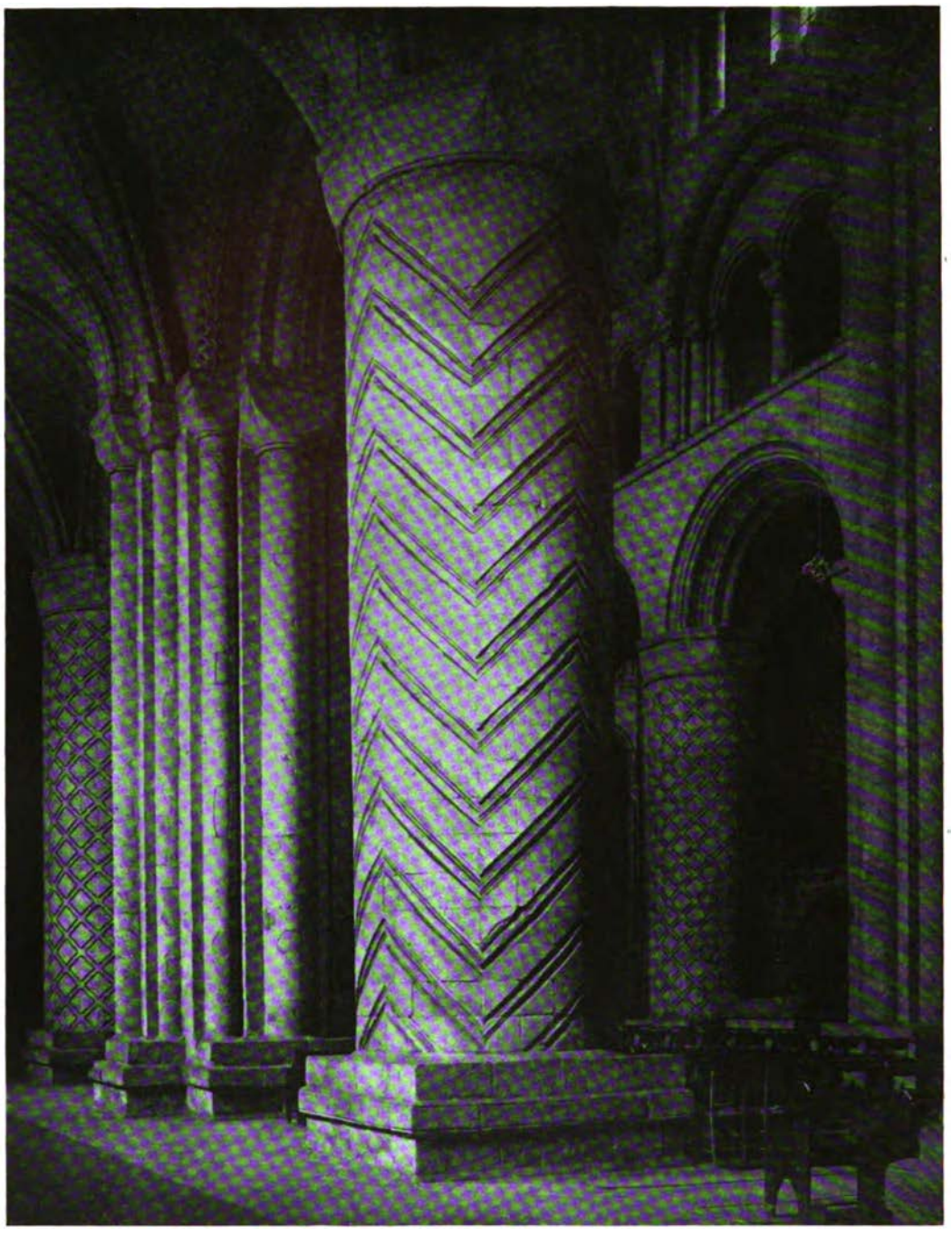
DURHAM CATHEDRAL: FONT AND PILLAR FROM THE AISLE
Frederick H. Evans

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DURHAM CATHEDRAL: ACROSS THE NAVE FROM THE SOUTH AISLE
Frederick H. Evans

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DURHAM CATHEDRAL: THE NORTH AISLE TOWARD THE NAVE
Frederick H. Evans

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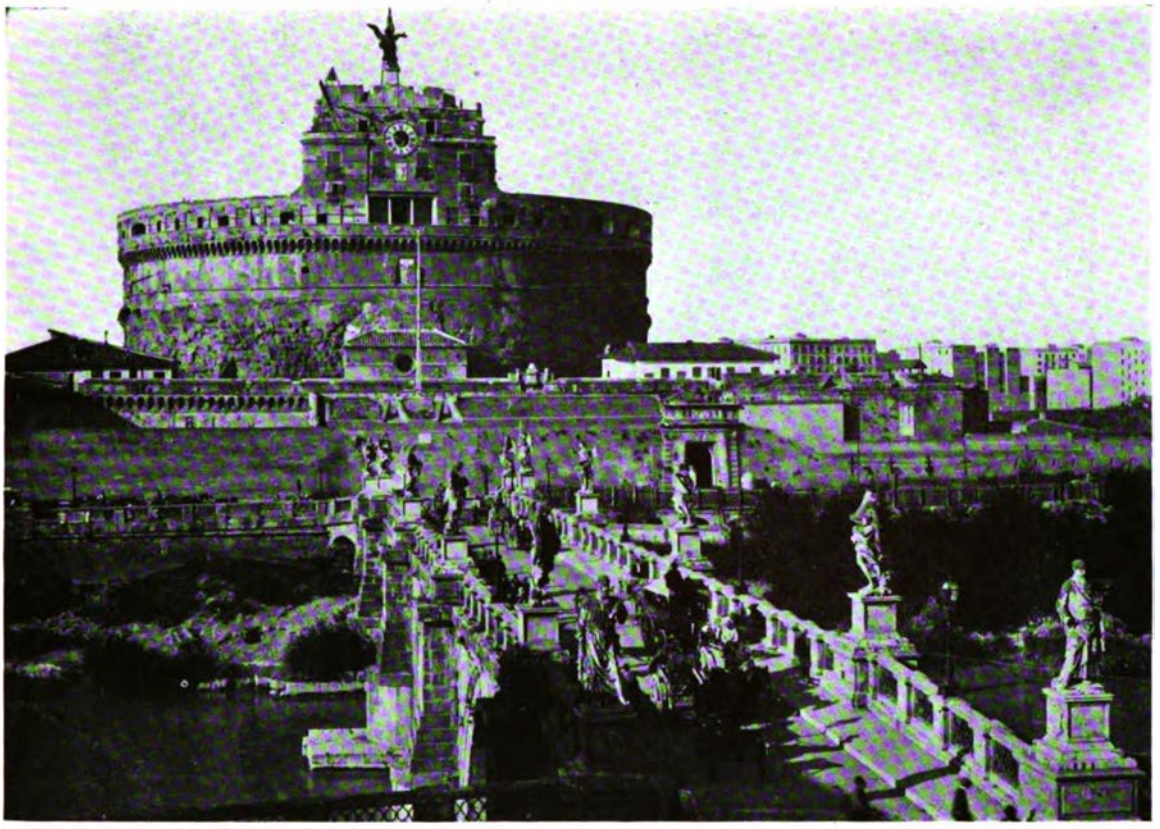
ROME—THE DOME AND LANTERN OF ST. PETER'S
"The Dream by Tiber's Strand," page 515

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ROME—PIAZZA DI S. PIETRO

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ROME—CASTELLO AND PONTE SANT'ANGELO

The Dream by Tiber's Strand[1]

BEFORE THE twentieth, or at least the nineteenth century, Italy and France were the pioneer countries in city planning, France succeeding Italy as a leader from the seventeenth century onward. And just as France had city planners of very exalted position, and of varying degrees of initiative and achievement, so Italy had her "city planners on the throne." The Sforzas, the Viscontis, the Gonzagas, the d'Estes, built palaces, fortresses, whole city quarters, and what they did not do, but had in mind, cogitated, dreamed of in regard to architectural achievement, would probably astound us, if revealed.

But it was in Rome, in the residence of the popes, that the greatest visions were dreamed and the most ambitious plans contemplated. In Rome everything was to be repaired, put in order, improved, for dreadful was its state in the beginning of the fifteenth century when the unity of the church finally was restored and the new pope of all Christendom, Martin V, took up his residence in the Eternal City (1420). Martin V, says Platina, his biographer, "found the city so devastated and desolate that not the face of a citizen was to be seen in it. He met the sight of dilapidated houses, of churches ready to cave in, of empty streets, of a city ruined and defiled."

In reality, a visitor to Rome at that time, more than at any other, must have been overwhelmed with the saddening spectacle of so tremendous a downfall. Everywhere there was evidence of disorder, of vandalism, of decay. Vivid is the description of this condition contained in the papal bull which in 1425 restored the ancient office of the street commissioners (*magistri viarum*). The population had solved its housing problem in its own way, invading the ancient monuments and transforming them into living quarters, shops, sheds, stables. Dirt, rubbish, excrements and refuse of all kinds, filled the streets. Cattle grazed among the ruins. "Rome had become the city of the cowherds," says Leopold Ranke, in his *History of the Popes*. "The inhabitants were not to be distinguished from the peasants and the herdsmen of the fields. The hills had been abandoned long ago. The population lived in the plain along the Tiber. The narrow streets

[1] The illustrations accompanying this article were, with the five exceptions duly noted hereafter, made for and under the direction of Mr. Albert Kelsey, F.A.I.A., of Philadelphia, who has kindly given permission to publish them in the JOURNAL. Members attending this year's Convention will recal Mr. Kelsey's lecture on "*Rome, Radiating Rome*," which was illustrated with the photographs appearing in these pages.

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From "Römische Veduten," Herrmann Egger

VIEW FROM THE PLATFORM OF THE "BELVEDERE"
THE COLOSSEUM AND THE ARCH OF CONSTANTINE
IN THE BACKGROUND
By Marten van Heemskerck (1498-1574)
The drawing was executed between 1532-1536

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ROME—THE PIAZZA DI S. PIETRO FROM THE SUMMIT OF THE DOME OF ST. PETER'S

were unpaved. Balconies and arches suspended from house to house increased their obscurity. Cattle ran about as in the villages. Marshes, interspersed with gardens, covered the whole stretch of land from S. Sylvester to the Porta del Popolo. There wild ducks were hunted. Even the remembrance of antiquity had vanished. The Capitol was the Hill of the Goats, the Forum Romanum the Field of the Cows. The weirdest tales were told about some of the ancient monuments that still remained. The church of St. Peter's was in danger of collapsing."

The city which once, as the resplendent capital of a far-flung empire, numbered more than a million inhabitants, now harbored a few tens of thousands, and had sunk to the lowest level of pitiful degradation. Florence, Siena, Bologna, Ferrara, Milan, Venice were active, rich, flourishing in a really princely way. Rome was a beggar—living on the ruins of great times past. And for this reason there was not a city in Italy for which the Renaissance signified so momentous an opportunity as it did for Rome. Florence was supreme at the outset. Siena, Venice and other cities were in advance of Rome for a time. But after the lapse of a hundred years, from the beginning of the architectural Renaissance, Rome had surpassed them all in the process of growth and of rejuvenation, and had become, besides Paris, the greatest center of attraction in the Western world. Rome of the cowherds had become Rome of the modern popes, where they reigned supreme.

* * *

Rome of the modern popes, a city created by men of whom few were Romans, is above all Rome of the sixteenth and the seventeenth centuries. But it was in Rome of the cowherds that the boldest dreams had their day, and the most stupendous plans were framed for restoring, magnifying, and beautifying the city. That an atmosphere of mystery surrounds these plans does not make them less intriguing. Did they exist on paper, or had they only taken shape in the imagination of their originator? Who was he? These plans are sometimes referred to as the projects of Nicholas V, who was pope in the years from 1447 to 1455. Gianozzo Manetti, his biographer, describes them and gives to the pope the credit of having conceived them. But Giorgio Vasari, in his biographies of Bernardo Rossellino and of Leon Battista Alberti, once designates the latter and once the former as their originator, contradicting himself as he so frequently does.

As a matter of fact, both Alberti and Rossellino were employed by the pope in Rome. Alberti, engaged in writing his great work on architecture, lived for a couple of years at the papal court. Thus, it seems

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From "Römische Veduten," Herrmann Egger

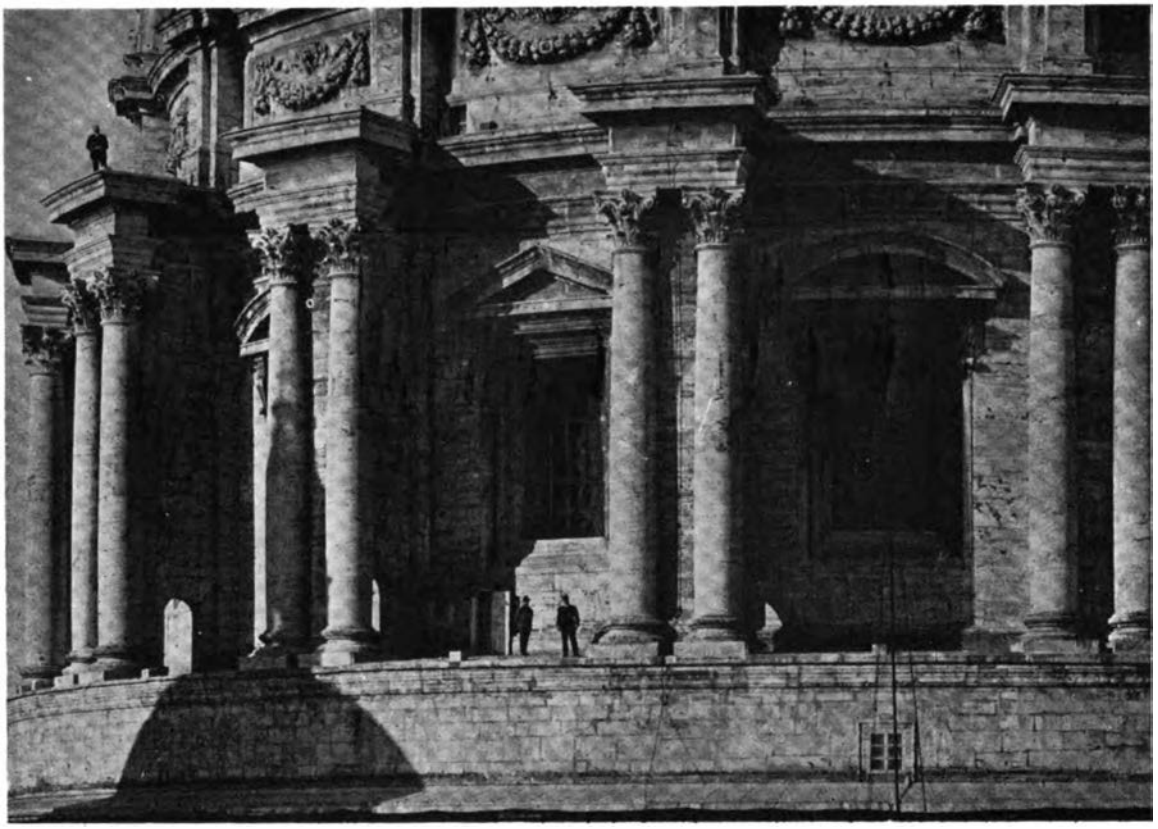
PIAZZA DELLA BOCCA DELLA VERITÀ
THE PSEUDOPERIPTEROS (LEFT) IS THE CHURCH S. MARIA EGIZIACA
THE VESTA TEMPLE IS AT THE RIGHT; THE CHURCH S. MARIA IN COSMEDIN AND A SPUR OF THE AVENTIN IN THE BACKGROUND
By Matthaeus Bril (1547?-1583)



From "Römische Veduten," Herrmann Egger

PONTE QUATTRO CAPI AND THE TIBER ISLAND
By an Anonymous Artist—16th Century

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ROME—THE DRUM OF THE DOME OF ST. PETER'S

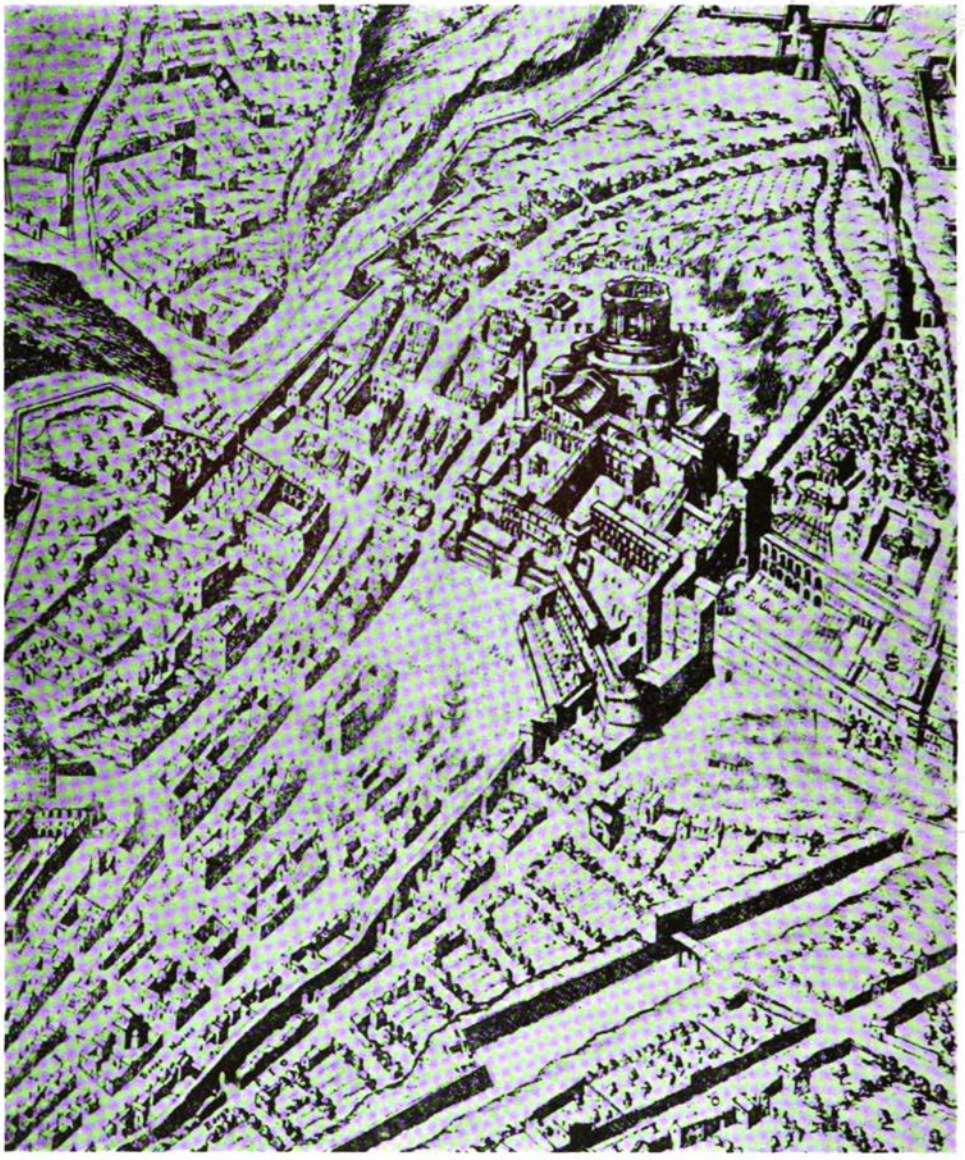
very likely that both he and Rossellino, although this is not mentioned by Manetti, had something to do with the conception of the plans. Manetti's silence regarding them can easily be explained. As the pope's biographer, he was not especially anxious to let the pope share with somebody else the honor of having conceived the great schemes which were being thought out. On the other hand, there seems to be no valid reason for giving to Alberti all the credit, as G. Dehio, the well-known German scholar, has done, basing his opinion on the spiritual kinship between the projects and the city planning ideas of Alberti, expressed in his *Ten Books on Architecture.*[1]

In all probability, when Alberti came to Rome and was received by Nicholas, a humanist and a Mæcenas, second to none among the popes, the latter had already long occupied himself with the idea of vastly improving the city, and many of the things he wanted to do had taken some definite shape in his mind. In deliberations with Alberti, and probably also with Rossellino, his intentions became strengthened and amplified and were, perhaps, finally embodied in actual plans drawn by either of these architects or by both. However, diligent search in the Vatican library and in other collections where the plans possibly might be found, has so far been in vain. But even if no drawings were made, there existed, in all likelihood, a written programme outlining the ideas of the pope and of his collaborators, the contents of which were known to Manetti.

What were the intentions of the pope? To enumerate them all would lead too far; but the plans may be broadly divided in two groups, of which one aimed at fortifying, replanning and reconstructing that part of the city—the Borgo—where the Vatican palace and the church of St. Peter's are situated. The fortified Borgo, including the Vatican Hill and the Castle S. Angelo, would form a spacious papal fortress within the strongly fortified, modernized Rome. The Vatican and the basilica of St. Peter would be rebuilt. From the Castle S. Angelo and the Ponte S. Angelo three streets, parallel or, perhaps, slightly divergent and arcaded from end to end, would lead to a spacious piazza in front of the reconstructed basilica. And Nero's obelisk, half buried in the earth outside the old basilica, would be erected in the middle of the piazza. Such were the plans regarding the Borgo, plans which Nicholas had started to realize when he died in 1455. Only the lives of many popes and the treasures of Rhampsinitus could secure their execution, it has been said. Nicholas passed away, hoping that posterity

[1] G. Dehio: *Die Bauprojekte Nikolaus des Fünften und Leon Battista Alberti. In Repertorium für Kunstwissenschaft. Vol. III.*

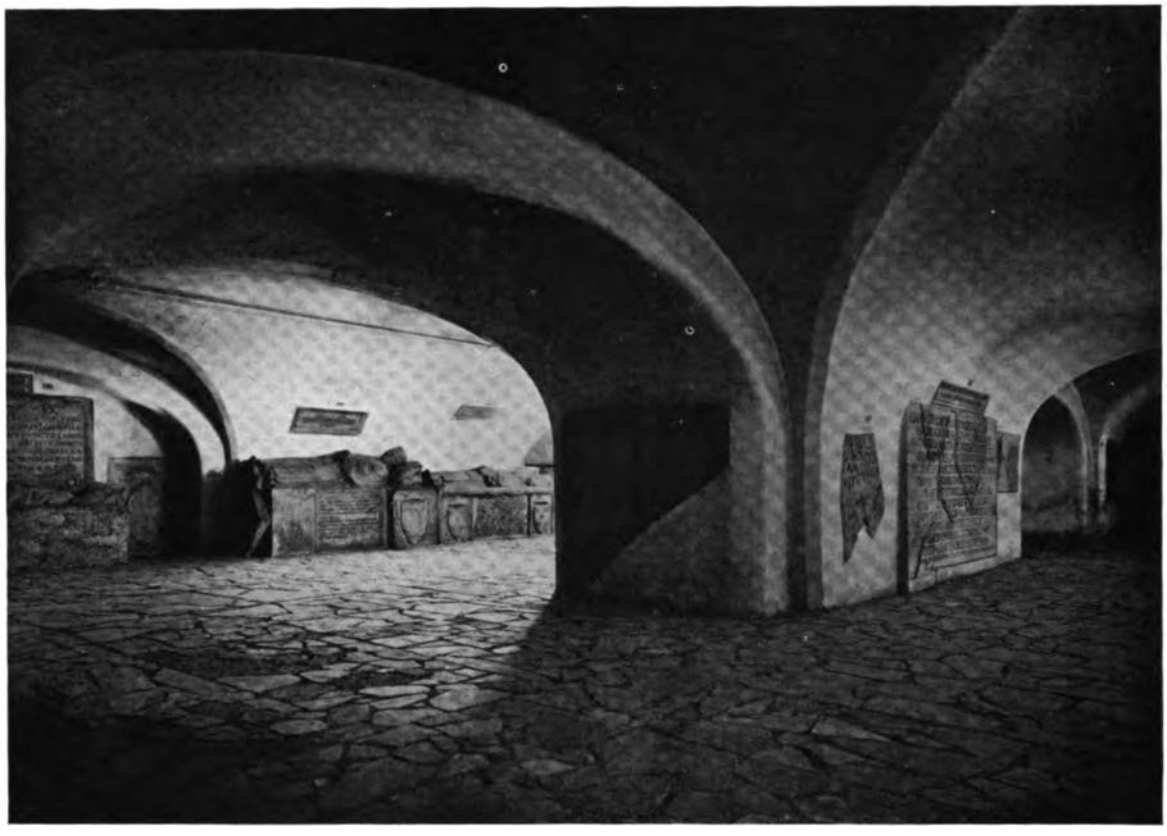
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From "Raffael als Architekt," Th. Hofmann

THE BORGO, SHOWING THE NEW CHURCH
OF ST. PETER'S IN COURSE OF CONSTRUCTION
From Lafrevi's Plan of Rome—A.D. 1577

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ROME—PART OF THE SUBSTRUCTURE OF THE OLD CHURCH OF ST. PETER'S

would carry out the plans, at least in part—as it has done, even if not exactly as he would have done it.

The pope was far-seeing. Small plans were not in accord with his nature. And when he looked out over the Eternal City from the windows of the Vatican, he had the vision of even greater things than the recasting of the Borgo. The sight of Rome haunted him. Was it a city? Was it not rather the weird landscape of a dream? Its urban element was a labyrinth of houses along the Tiber, where the dwellings of mediæval Rome, in various degrees of dilapidation, were crowded in a maze of narrow, winding streets. Here and there a mediæval church or some building of Roman origin accentuated, by force of contrast, as do gems on a tattered garment, the general impression of shabbiness and decay. This dingy urban agglomeration, to a large extent consisting of veritable rookeries, was Rome of the living. But the real Rome, that of the dead, was a mile-wide stretch of open land, for a great part devastated and desolate, dotted with ruins and groups of ruins—an impressive picture of greatness past forever, set in the corroded frame of the decrepit Aurelian wall. Here and there, scattered over this vast area, there were houses, defensive towers, churches and campanili, monasteries—touches of a clever artist's hand, contrasting elements, heightening the effect of this picture of desolation and of chaos.

And the pope saw it and dreamed—of life and cosmos. In itself the dream, translated into thought and will to act, is one of the greatest, because most characteristic, spiritual monuments of the Renaissance. It reflects, in an eminent way, the whole unbounded self-confidence of the epoch. Indeed, only an almost brutal will to self-assertion could engender Nicholas's vast plan for transforming, modernizing, renewing Rome. His predecessor, Eugenius IV, wanted to widen many of its streets. Nicholas desired nothing less than a complete replanning, one might say, for Rome recast according to his designs would have become an entirely new city conceived in the spirit of the Renaissance, with roomy piazzas linked up by means of straight, broad, arcaded streets; with extensive vistas ending in the focal points of stately monuments, new or old; with the enlivening sight of beautiful fountains pouring forth their water in interminable streams; first and last with the beauty of columnal porticos meeting the traveller's eye at every step.

In this conception the spirit of compromise was not an outstanding characteristic! The new confronted the old with formidable boldness. One thinks of the uprooting of an old tree and the planting of a new

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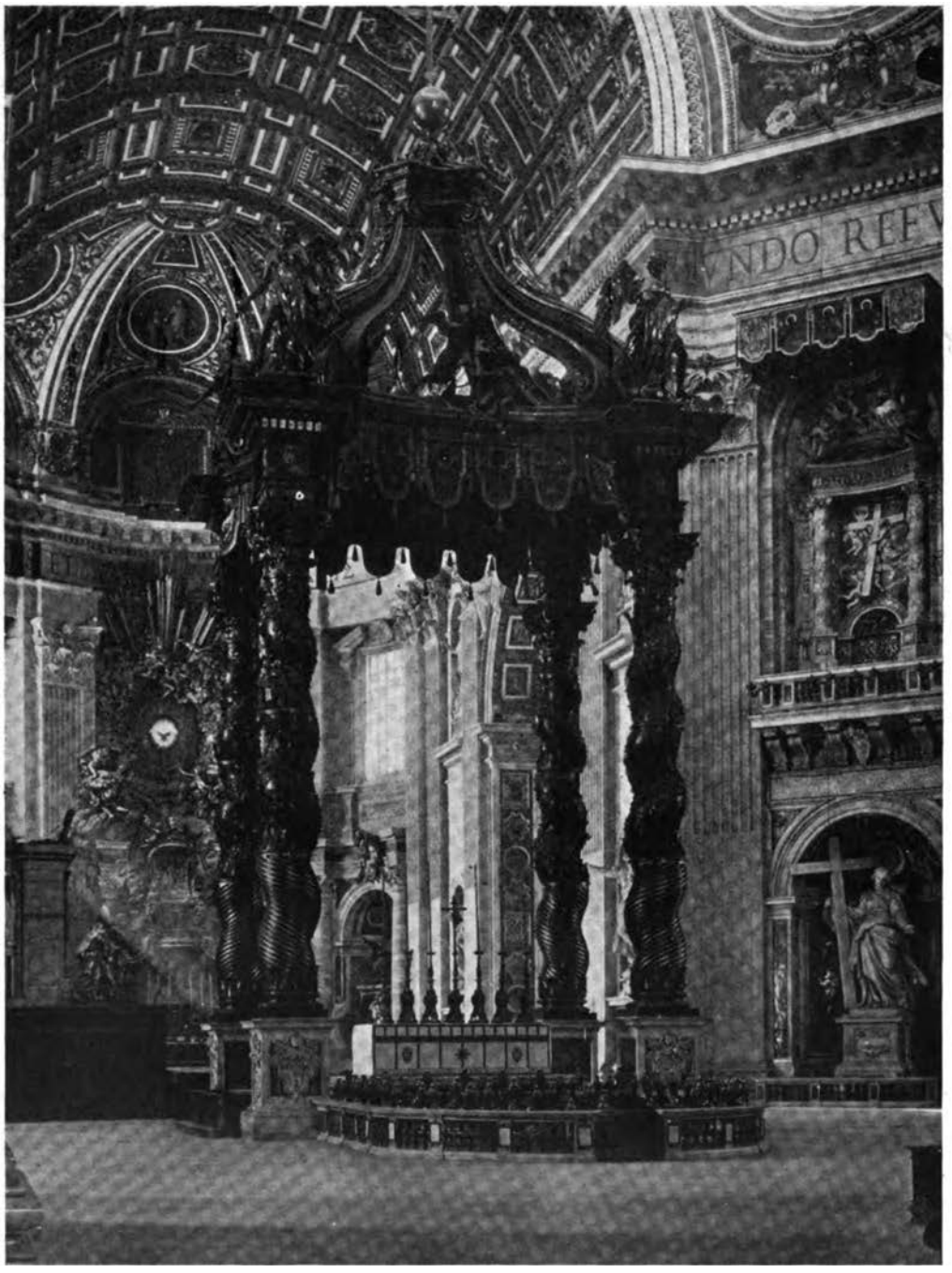


ROME—ST. PETER'S SEEN FROM THE CASTEL S. ANGELO



ROME—THE BORGO IN ITS PRESENT STATE—FROM THE STRAND OF THE TIBER

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ROME—THE CHURCH OF ST. PETER'S
THE CONFESSION

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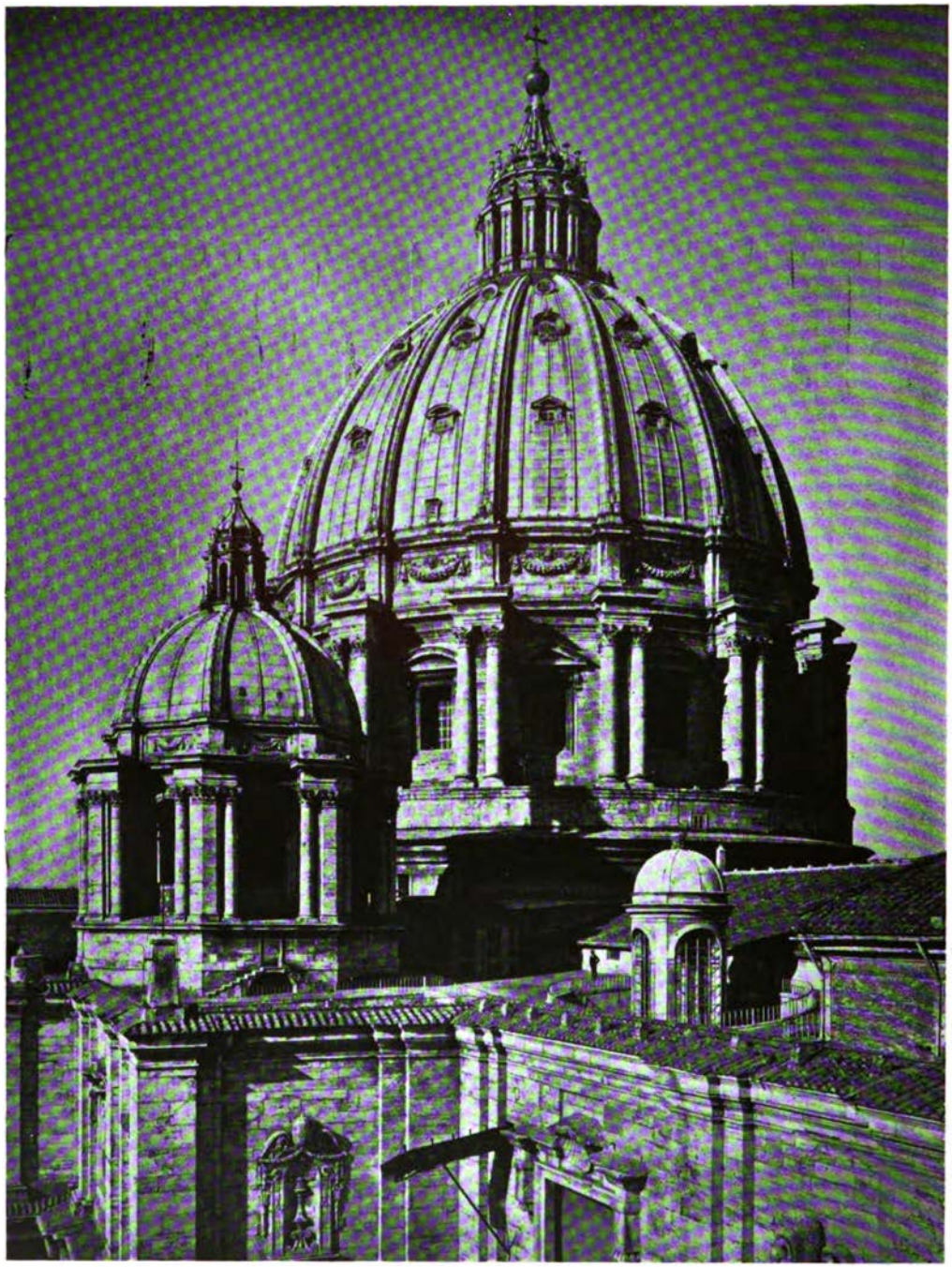
ROME—THE BRONZE STATUE OF ST. MICHAEL SHEATHING HIS SWORD
SURMOUNTING THE CASTEL S. ANGELO

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ROME—THE FIGURES OF CHRIST AND THE APOSTLES, BY BERNINI
CROWNING THE MAIN FAÇADE OF THE CHURCH OF ST. PETER'S
These statues are nineteen feet in height

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ROME—THE DOME OF ST. PETER'S

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ROME—THE SOUTH SIDE OF THE CHURCH OF ST. PETER'S
FROM THE STEPS NEAR THE SOUTH LATERAL ARCHWAY
A PART OF MADERNA'S GIGANTIC FAÇADE, LEADING TO THE VATICAN MUSEUM

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From "Römische Veduten," Herrmann Egger

ROME—FROM THE GARDEN TERRACE OF S. MARIA DEL TRIORATO
Copy of an original drawing by Domenico Ghirandais (1491)
By an anonymous artist contained in the so-called Codex Escurialensis

one in its stead, rather than of the grafting of new branches on an old stem. If Nicholas had lived long enough to realize his plans to any extent, the relics of the beloved antiquity itself would, if necessary, have been unhesitatingly sacrificed. Did he not, although criticised for it by some of his contemporaries, give the Vandals a free hand in the Forum and in the Circus Maximus? Was it not during his pontificate that the first great Renaissance palace in Rome, the Palazzo di Venezia, was begun to the music of the heavy, grating stone-wagons plying between the building-ground and the quarry of the Colosseum? Truly, he set an example which some of his successors were only too prone to follow. Very likely, had his life been ten years longer, he would have achieved, as a devastator, a fame equal to that of Sixtus V, the arch-destroyer among the popes. For with Nicholas the willingness to destroy was quite commensurate with the desire to renew. In scope of interest, as regards city improvement, he excelled almost all of his successors. It was by no means confined to Rome, his name being connected with more or less important enterprises in Castelnuovo, Civita Vecchia, Fabriano, Gualdi, Orvieto, Ostia, Vicarello, Viterbo.

When death approached, Nicholas summoned his legatees, the cardinals, and gave them a last reminder of what he had done and had wanted to do. Perorating, he implored them to continue and to conclude the great work which he had begun, "not by ambition, love of display, empty desire for self-glorification, but for the purpose of increasing, in all Christendom, the respect for the Apostolic chair." These and similar thoughts he expressed in his Testament, seemingly unmindful of the fact that he was the head higher than those who surrounded him and that the consistent carrying through of such plans presupposed a succession of men of his own stature and inclinations. Yet, Nicholas did not plan and plead entirely in vain. Rome, gradually emerging from the gloom of the past into the resplendent light of a new day, was at the beginning of one of the greatest periods in its history.

NILS HAMMARSTRAND.

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EASTWARD!

THE SENSE of direction is an illusive one. Like a musical ear some have it and others have it not. To those who have this sense of the four cardinal points of the compass there often comes the same enjoyment and feeling of mastery which come to the musician when he undertakes the interpretation of some complicated operatic score. As the signs and characters indicate to the musician his course, so the points of the compass direct the way of the man who must pass through the unexplored. Whether or not one can acquire this sense of the north is a question into which I shall not venture here; but it is quite certain that where a man is obliged through circumstances to live by his wits, in wild conditions, he apparently experiences little difficulty in finding his direction—presumably by orientation.

This sense is as old as man himself. The Old Testament history is full of allusions to the concern which people then had for the points of the compass and to the romance which they built up about them. Even then each point of the compass had, as it still has, a real personality of its own, varying in kind, to be sure, according to locality and whether it be on one side of the equator or the other, but nevertheless quite distinct. In countries north of the equator, and it is those which I have particularly in mind, there was a very strong aversion to the north. It has been usually associated with cold and dismal thoughts, the home of the Spirit of Evil; while to the south people have looked for warmth and cheer. As the sun in the east, each day dawn, brightens the heavens with golden and colored lights we have come to regard that quarter as the one from which new life comes, where new ideals and hopes are born.

And who has ever watched the sun sink beneath the western horizon, leaving its kindly glow to guide us into the shadow of the starlit night, that has not wondered what was beyond? It is because of this that we have come to think of the west as the direction of finality, and these personalities which the points of the compass seem to possess, and the traditions which have come into being because of them, have made their mark upon church architecture throughout the Christian world.

The south was, and is today, considered a desirable direction in which to face a building, particularly in countries with a variable climate and a limited amount of winter sunshine. It is noteworthy that the majority of parish churches in England are not only placed on the north side of the road, or street, so that entrance may be through the south porch—always considered the most hospitable side—but they are built, almost universally, very close to the north line of the church property, so as to give the greatest amount of room on the south. There was a strong antipathy amongst the countryfolk of the Middle Ages, and in fact it still exists to a degree, to being buried on the north side of the church. This side was left for many centuries unconsecrated for the interment of the unbaptized and for those who had taken their own lives. Occasionally the latter were buried at the nearest cross-roads; it was thought that the intersecting roads, in the form of a cross, gave the land a sort of automatic consecration!

Bearing in mind this acute sense of the various points of the compass which for so long existed it is not hard to understand the concern the churchmen of the Middle Ages had for the proper orientation of their places of worship. The absence of it, as may be so often noted, is far more to be wondered at.

In later years the word *orientation* has come, especially amongst archæologists, to have a two-fold meaning. It may refer to the placing of the whole fabric of the church with regard to the exact east, or it may be used to indicate the number of degrees in which the chancel or choir varies in direct alignment from the rest of the church building. But the generally accepted use of the word is that which has to do with the setting out of the building as a whole with regard to the east and west; and so planning it that its apsidal end shall be due east. However, one need only place a compass in a few of the English or French churches or cathedrals to find that both nave and choir are rarely in perfect alignment in respect to the exact east. They frequently vary forty-five degrees one way or the other. Moreover, there are some instances in which the churches have been entirely reversed, and have their altars at the west end, but these are so few that they are hardly worth mentioning. It is enough to note in passing that they were built purposely north and south, or even with their altars at the west end, as a direct protest against Catholic usage and custom—usually about the time of the Reformation.

In a broad sense I believe the orientation of churches is more a matter of custom than actually that of regulation by any Church canon. The entrance to the Roman Christian church was quite frequently at the west, but in these cases the officiating priest stood, so far as possible, with his face to the east and his back to the altar.

The northern or Gothic races appear to have been much more sensitive to the proper placing of their churches than were the peoples of Southern Europe; the Church in Rome in the early centuries was apparently indifferent to the question, and some authorities claim that the rite of orientation was entirely unknown to primitive Christianity, and that it was developed during the first three or four centuries of the Christian era.

The second and less general use of the word *orientation,* that which has to do with the exact alignment of nave and chancel, is one which has been a source of much speculation. It is no exaggeration to say that in almost all of the churches which were built after the year 1200 A.D. and before the 16th century, we find that their chancels are deflected, usually to the south. However, in trying to get at the reason for these "weeping" or "skew" chancels, as they are frequently called, we must first determine whether the naves and chancels were built at the same time. If they were not, it is quite as likely that the nave is deflected and not the chancel. Whichever way it may be the deflection is most frequently found in churches built about the middle of the 14th century.

What is the explanation? Two quite different schools of thought, the Symbolist and the Rationalist, have tried to unravel the problem for us. Some of their explanations seem reasonable—others a bit improbable. And I

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believe that if we combine the results of their research on a sort of middle-ground, we will not be far from getting at the true explanation of the deflected chancel. The Symbolists say that the irregular alignment of the chancel was purposely planned so that the sun might shine, through the east and south windows, upon a certain shrine which was dedicated to the saint, or saints, after whom the church was named. Or that the inclination was significant of the drooping of Our Lord's head as He hung upon the Cross. This they call the "Leaning Head" theory.

The Rationalists, on the other hand, take a rather more practical view of the feature. According to them, in churches in which the chancels were built after the naves, in all probability the chancel arch was not cut through until the chancel was, at least, partially finished; or if so, the opening was hung with some screen which obscured for the time being the main body of the church and thus made it difficudt for the masons to get a true alignment, and the unalignment was therefore by accident. But they also put forth a more plausible theory and one which precludes any possibility of accident or chance: that it was so deflected to give a sort of illusion which would make the interior of the church appear to be longer than it really was.

None of these explanations of the deflected chancel are probably wholly applicable to all the periods in which we find it. In different centuries, and in various localities, diverse influences have made themselves felt, and it is therefore assuming too much to claim that in any one theory lies the real explanation of this characteristic, common to most of the parish churches in England, as to its whys and wherefores.

STEWART F. CAMPBELL.

London Letter

UNDER the direction of Mr. Wheatley, the Socialist Minister of Health, considerable impulsion has been given to fresh experiments in rapid house building. When, under Lloyd George's Premiership, the Ministry set up a special department for the study of patent methods of construction, a very large number of practical tests were made of the various systems ranging from the steel frame to the thin pre-cast concrete slab system of the Waller Housing Corporation. Very few of these specialist firms have survived, for it soon became evident that the main item of cost in housing was not that of the walls, and with an increased supply of brick available, the brick house reasserted itself at the expense of its rivals.

Present experiments are directed largely towards increased speed in erection, and the most interesting experiments are those in connection with steel houses. Various systems are employed—all steel framing with an external casing of steel plates, and wood framing finished externally with steel plates, and finished internally with bituminous paper and composition boarding. Lord Weir's experimental bungalow at Cathcart (Glasgow) is constructed on this system, and has reinforced concrete chimneys. The roof is of wood, with a covering of sacking and asbestos slates, and the building is erected on a specially prepared concrete foundation. The time of erection, once the foundation is prepared, is given as ten to fourteen days, and the cost of a bungalow complete, including fencing, paths, and so on, is in the neighborhood of £460. The accommodation comprises a living room (204 sq. ft.), two bedrooms (170 and 108 sq. ft.), scullery (80 sq. ft.), a larder, coal cellar, and bathroom. All steel houses designed by the Duke of Athol, in conjunction with William Beardmore & Co., are somewhat similar and it is claimed that they can be ready for occupation within a week! A three-roomed house, with scullery and bathroom, including certain furniture, is to cost not more than £420.

The houses look well enough in the drawings, but one cannot help fearing the reappearance of the shoddy dwellings of three years ago, complete with cracking stucco and diamond-shaped asbestos tiles. No amount of speed in building can excuse some of the blots on the Englishman's reputation for good domestic work.

* * *

Apropos of remarks appearing in the JOURNAL for August on the Bank of England, it may be interesting to know that work is to be begun, and Sir John Soane's frontage is to be retained. The Bank is making a temporary move to Finsbury Circus, where it will be located what time the building in Threadneedle Street is in progress. It is the first time within living memory that the Bank business will have been carried on outside the famous triangle of ground dominated by the Old Lady of Threadneedle Street.

* * *

Two new buildings of moment have been completed within the last few days, and each is of a particular interest as revealing the presence of the struggle between ancient and modern expression. Sir Edwin Lutyens' Midland Bank in Piccadilly adjoins Prince's Restaurant, but is specially designed to harmonize with Wren's church of St. James which lies to the east of it. The design has come in for an unusual amount of lay criticism, and while it is in many ways charming, one cannot help feeling that Sir Edwin has been amusing himself again, in the same way as he has done in designing the Anglo-Persian Oil Company's Offices in Finsbury Circus (Illustrated in the JOURNAL of July, 1923).

The façade is a somewhat false expression of the interior, having three marked horizontal divisions to express one big internal hall rising from floor to roof, and the stone detail is of the much undercut Grinling Gibbons variety. Sir Edwin is a master in providing in his London buildings for the charming weathering of Portland stone and brick. And while this Renaissance essay contributes nothing to Bank design, it has the great merits of pleasant manners.

The second building, Adelaide House, is by Sir John Burnet & Partners, and rises sheer from the River at the head of London Bridge. It aims at the modern expres-

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sion in office building, suitability for its purpose, and craftsmanlike use of materials. The design depends chiefly on mass, weight of void and solid, and an expression of the verticality of the structure.

This building is really the first attempt by any big London architect to compete in fresh modernity with the new school of continental designers, and is of extraordinary interest as a certain starting point for further experiments in England on similar lines. Adelaide House will probably *"faire école,"* and we can see in the spirit behind it the death warrant of the faded adaptations of the new Regent Street.

* * *

At the time of writing indications point to a continuation next year of the great Empire Exhibition at Wembley. Financially the exhibition has resulted in a loss. The expense was of course far greater than was anticipated, and the estimated public "gate" far smaller; the idea of the extension of time is to permit the exhibition authorities to recoup their expenses through the gate money which would be provided by a reopening in 1925.

So far, about 20,000,000 people must have passed through the turnstiles, and the estimate was for 30,000,000. The higher figure seems almost incredible, for as it is the exhibition has been almost continuously packed to the limit with visitors, and must therefore be considered a real success as a public attraction. A great exhibition of this kind may well be an unqualified success and yet result in a call upon its guarantors; it is interesting in this connection to read the report that last year's Gothenburg Exhibition resulted in a deficit of $10,000,000.

* * *

The proposed amalgamation of the Society of Architects and the Royal Institute is on the eve of accomplishment, the former body having generously and gladly sacrificed its existence in the cause of registration. The consent of the Privy Council to the amended charter is now in process of attainment and by the end of the year the absorption should be a *fait accompli.* The Society will probably hand over the bulk of its assets to the R. I. B. A., reserving only sufficient to provide its own funeral banquet and obituary record. For the objective is so nearly in sight, that, as W. S. Gilbert said, "decease will be a merciful release."

* * *

The Franco-British Union of Architects has just held its annual meeting, the venue being this year in Paris.

Since its inauguration the Union has added greatly to its numbers, and has resulted, on the English side, in an increased interest in the progress of French architecture.

The visit to Paris provided an opportunity of realizing that French art is very much alive, and that a school of modern architects has arisen, men who combine the easy mastery of Beaux-Arts planning with the most modern expression of function and material. The Opera, a newly converted branch of the Banque de France, and the recently erected Stade Nautique,[1] in which were held this year's Olympic swimming contests, provided the official visits. But Boileau's new shops of the Bon Marché,[2] Perrets' Church at Raincy, work by Marras,[2] and some excellent new shop fronts provided an equal interest. Work on the French section of the 1925 Exhibition des Arts Decoratifs et Industriels is well advanced, and it looks as if the French were determined to make a bold bid for their old position of architectural pre-eminence; their new work is certainly stimulating and is scarcely sufficiently recognized as yet by the architectural press.

We cannot conclude these notes without a passing reference to some remarks by that notable architect and penman, Mr. Egerton Swartwout. In the 21 May and 2 July numbers of the *American Architect* the writer of these letters received from stock one of Mr. Swartwout's courteously thrown bricks, for having inferred in Mr. Swartwout certain reactionary architectural tendencies. At the same time it was suggested that poor "X" was certainly not an architect, and was probably a lady!

Well, well, we will not give away secrets; veiled identity can only heighten the charm of controversy, and we like to think of Mr. Swartwout picturing us alternately as a silk clad blonde or a stern visaged wearer of Dundrearys. Whether we build or do not build, that is also a question; but we know the work of our distinguished commentator, and we still think he is a *leetle* prejudiced. In the July number he sniffs at the Industrial Hall at Gothenburg, forgetting perhaps that it is Exhibition architecture. But we'll have our Gothenburg and he can have his World's Fair.

We are sure Mr. Swartwout will like this cynical little rhyme. It is attributed to a certain clever London architect who designs real buildings, writes books, and teaches architecture.

"Mutules in the cornice, acanthus round the door,
Small panes in the windows—three feet from the floor.
Georgian in the country; Neo-Grec in town—
That's the stuff to give 'em, if you want renown."

November, 1924 "X."

[1] See *Paris Letter* in the JOURNAL for July.
[2] See *Paris Letter* in the JOURNAL for September.

The Secretary's Page

54. CHAPTER REPORTS. The Secretary is beginning to notice the constant recurrence of the same names as he looks over the Chapter minutes of meetings. The percentage sent in, compared with the total number of Chapters, is disappointingly small. Can it be that the other Chapters are not holding meetings? The Secretary suspects that this is not the case, but that in reality there are many various reasons which make it difficult for the different secretaries to have copies of their minutes made and sent to the Octagon. The Secretary's job is much simplified thereby. Note the names this month and, if you care to bother, note the names of the last few months. This month the Secretary has PITTSBURGH, CHICAGO, BOSTON, BALTIMORE, NEBRASKA, WEST TEXAS,

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WASHINGTON STATE and CLEVELAND. The Illinois Society Bulletin is here as usual.

PITTSBURGH devoted its October meeting to a delightful address on "Modern Architecture in Europe" by Professor Eric Mendelssohn of Berlin, Germany.

CHICAGO, through its leaflet, printed in advance of each meeting, gets its business out of the way promptly, and then has time for talks and discussions. This last month the subject was "The Landscape Architect."

CHICAGO will have a large delegation at the Fifth Regional Conference in Ann Arbor in November. Such coöperation and interest is to be highly commended.

BOSTON'S printed advance leaflet, too, must be a great help in keeping up each member's contact with the Chapter. Its annual custom of starting the year by devoting the first meeting to informal relating of the summer travels of different members is to be most strongly recommended to the consideration of other Chapters.[1]

BALTIMORE'S October meeting was devoted entirely to business. The Chapter seems busy and interested.

NEBRASKA'S attractive Bulletin is here again. The Chapter members have been active in securing signatures to petitions for placing upon the city ballots the names of worthy candidates for the School Board. It seems very significant to the Secretary, from such signs, that the profession is slowly awakening to a sense of its responsibility in the public administration of this great country of ours.

WEST TEXAS shows interest. The Secretary is much pleased to note the recurring statements, in different minutes, that letters from the Executive Secretary were read and discussed. This helps the Secretary's office in the carrying out of its many and varied duties. The fact that the three new Texas Chapters are to have a joint meeting at some agreed on place is worthy of note. It is along the line of the regional conference idea and the Secretary hopes to have more and more of similar chapter coöperation.

WASHINGTON STATE devotes most of its printed Bulletin to the promulgation of the procedure recommended by the Oregon Association of Building and Construction, known as the Oregon A. B. C.[2] This is a Building Congress and is doing admirable work under the leadership of the architects. Let the good work go on and spread to other Chapters. Mr. Medary and Mr. Baldwin, who have been in Alaska during the summer, were to be the guests of the Chapter at the October meeting. If the various architects, members of the Institute, traveling about the country on business or pleasure, would only let the local Chapters know of their presence it would be a great joy to the local men to arrange special meetings for the purpose of becoming better acquainted. And who knows what might come of such meetings?

CLEVELAND'S October meeting was held in its new permanent quarters and they seem very happy over the possession of them. Perhaps it was the new quarters, but, in any event, it was a large, well attended meeting.

55. ARCHITECTURAL SERVICE. The Secretary, in the course of his travels, ran into a very interesting stand taken on the subject of architectural service by some architects, and further discussions have led him to believe that there are quite a number in this country who have a similar idea. It is worthy of thought and discussion for it touches, in the mind of the Secretary, on the entire future of the profession. It developed during a discussion as to what the architect should do about the contractors who were making drawings and specifications for buildings for owners, and carrying the work to a conclusion without bothering about the profession. What could be done to prevent this most unsatisfactory condition of things, unsatisfactory in reality for all three parties concerned? One answer was put forward, and when the Secretary, in his travels, found this to be a growing practice and looked upon without any special disfavor, he felt it should be called to the attention of the membership for careful consideration.

To prevent the contractor from giving the full architectural service, where the owner might not, either through ignorance or personal desire, consider the employment of an architect on the work, it was thought a help to make arrangements with the contractor whereby the architect, without any contact with the owner, should make the necessary drawings and specifications which the contractor needed. It was said the contractor was glad to pay well for such service.

The Secretary wonders as to just what position the architect assumes by such coöperation with the contractor and what he gains thereby. Is he in any way helping the standards of the profession, or is he helping the standards of the work produced directly by the contractors? Is he giving architectural service? Is he making it desirable for the contractor to work with the architect? Is he making it possible for the contractor to comply with the registration laws of any state in the Union? Is he helping the contractor to secure his jobs more easily? Is he showing the owner the value of an architect's services? Is he, perchance, proving that all an architect is to do is provide the necessary blue prints; that the contractor will look out for the proper carrying out of the work, the actual specifying of materials to be used and the final acceptability of the work as done? Is such a method better than the frank statement by the NEBRASKA CHAPTER that any contractor making plans for buildings shall be considered as a competitor? Or would such procedure, in Nebraska let us say, remove the charge of competitor against the contractor providing buildings for owners when the owner does not employ an architect? Would such helping of the contractor simplify the matter of getting plans, say in Illinois, to meet the regulations of the Registration Board? Is it not, perhaps, a further development of the idea of partial service rendered by the architect, with the added factor of having no touch whatsoever with the owner himself?

56. BETTER HOMES IN AMERICA. The interesting Guidebook for the 1925 campaign has just been issued, and the Secretary recommends it to all architects. It has been prepared with the greatest care and completeness and opens the way to demonstrations of better homes in every community in the country. The local chairmen —incidentally, these are usually women—are being appointed, and they will be busy getting their committees

[1] A comprehensive abstract of this very interesting session appeared under *Notes from Abroad* in the JOURNAL for November.

[2] A full account of this organization appears under *Industrial Relations* in the JOURNAL for May.

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formed and under way. The Guidebook recommends that architects be asked to serve on some of these committees, but, as you all know, nothing will probably take place in that way without direct coöperation on the part of the architects. *Therefore the Secretary takes it upon himself to urge earnestly and emphatically that every Chapter appoint a "Better Homes" Committee and instruct it to get in touch at once with the local committee to do its share of this work. If no committee has been appointed in its district get busy and help in the formation of one.*

"Better Homes in America" is under the direct guidance of Mr. Herbert Hoover, and two members of the Institute are on the Board of Directors. Better Homes Week is 10 to 17 May, 1925.

The movement is nation-wide in scope. The central organization, at National Headquarters, in Washington, D. C., issues publications and conducts research. Demonstrations are conducted entirely by voluntary local committees—chosen and led by chairmen appointed each year by National Headquarters—in cities, towns and rural communities all over the United States. The local Better Homes Campaigns consist of publicity, lectures, discussion meetings, and exhibits; and, wherever possible, they include, during Better Homes Week, the demonstration of a house, planned and furnished for a family of modest means, illustrating the best the community can offer in comfort, convenience, and beauty at a cost within the reach of families in moderate circumstances.

EDWIN H. BROWN, *Secretary.*

Industrial Relations

The Committee on Industrial Relations has under consideration at the present time a question submitted to it by the Board of Directors with regard to the advisability of the Institute's coöperation in national apprenticeship training. The Dallas Vocational School for the training of various crafts has suggested that the Institute should coöperate with it. From another part of the country the National Associations of Plumbers and the Sheet Metal Workers have asked for coöperation.

The Institute at the Convention of two years ago put itself on record as favoring industry movements which provided for coöperation of all the elements of the industry combined, to the exclusion of none. This has resulted in a very large support by the architects for the Congress of the Building Industry movement in various localities. The Committee on Industrial Relations will have to consider the wisdom of turning part of its efforts towards the support of national movements in specific crafts to the injury, perhaps, of the more widespread and influential local and general efforts.

The Committee on Industrial Relations is also being approached by various branches of the building trades for opinions on the methods pursued in the industry in so far as they involve fair or unfair practice, in bidding—for instance. The Committee of the NEW YORK CHAPTER which last year produced an admirable report on unfair practices in the industry in the city has recently suggested a much more extended survey of the situation. Such investigations, if they are fair minded and result from a joint study of the subject by all the branches of the industry, would be of great value.

An interesting complaint with regard to the relations between architects and contractors is contained in the Bulletin of the Associated Building Contractors of Illinois, which reports an address by Mr. R. M. Cope of Decatur, at one of their recent meetings, in part as follows:

"I will relate an experience of my firm. Last spring we were invited to enter our bid in competition for the erecting of a building. We obtained a list of contractors invited to bid, and noticed on this list one contractor who had defaulted on every contract he had had recently. We inquired from the architect if we were expected to compete with this party. On being assured that we were we refused to bid. We knew that we had no chance to submit a lower bid than he would, because he did poor work and used unfair methods in purchasing material and awarding sub-contracts, and that he would make his profits by dishonest methods. All this was known by the architect. This party, of course, submitted the lowest bid and was given the contract. He could not furnish Surety Bond, but finally got a friend to go his personal bond. The building has since been completed, about two months overtime. The contractor took his profits out of the first payment, the bondsman lost several thousand dollars, and the owner got a very poor job. When the architect was asked why he accepted such poor work from this man, he replied that an architect was so glad to get through with this kind of a contractor that he would accept almost any kind of a job. When asked if he would accept that kind of a job from my firm, he answered, very indignantly, that he *certainly would not,* and yet contractors are asked to compete with this kind year after year. Is it any wonder that contractors are losing their respect for architects and that they are contracting direct with the owner?"

This particular story was told in the course of an address called *Inconsistencies of Architects.* It would seem that the incident is hardly an inconsistency on the part of the architect, but is a piece of foolishness which in the end will do more harm to him than to any one else.

ROBERT D. KOHN, *Chairman.*

Public Information

The following notes have been received from THE SOUTHERN CALIFORNIA CHAPTER, and are published in this column as of interest:

To make the profession of ever increasing service to society is one of the objects of the Institute as stated in its Constitution. And as the National body has been diligent in its coöperation and guidance in public affairs which relate to architecture, so should the Chapters follow this example in local activities.

In public service, the SOUTHERN CALIFORNIA CHAPTER has done efficient work through the representation of its members on public and semi-public bodies. Years ago the Chapter was responsible for the establishment of a City Planning Commission, and now one of the ex-Presidents of the Chapter is President of that influential public body. On the Los Angeles Municipal Art Commission, which passes on all public and other important structures, the Chapter is represented by an officer and one member. The Building Inspector for the City and the President of the City Planning Association are both Institute mem-

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bers, and, most important of all, every member of the State Board of Architecture of the Southern District of the State belongs to the Institute. Other public work includes the improvement in Municipal regulations and legislature. State Laws, particularly the Burnett Tenement Law and laws relating to license and practice of architects, have been subjects of Chapter activity, and investigations of faulty construction and unethical conduct have been investigated and corrected.

The Chapter has affiliated itself with one of the important professional organizations of the community, the Joint Committee of the Technical Societies of Los Angeles, which includes members of the American Chemical Society, The American Institutes of Architects, of Electrical Engineers, of Mining Engineers, and the American Societies of Civil Engineers, of Mechanical Engineers and of Landscape Architects. It is a pleasure to say that this combination of professional men has existed for many years, co-ordinating the efforts of many professional groups to the benefit of all. There are weekly luncheons which are well represented and are productive of new ideas and new effort.

In the fast growing community of the Southwest the usual unfortunate gridiron subdivision and mushroom growth of bungalows has been a subject for correction. Because of persistent effort and the tactful help of the Chapter, the real estate interests and the real estate agents of Southern California have, with increasing confidence, brought their problems to the Chapter. Thus, subdivisions have become well planned communities with attractive homes and improvements. In fact, several recent real estate developments have been planned by members of the Institute, and the architectural designs for the houses have been secured through competitions passed by the Chapter and judged by its members.

To make stability and beauty popular the profession must everlastingly keep at public opinion and public agencies, and only by persistency and coöperation can the ideals of the Institute be upheld.

JOHN V. VAN PELT, *Chairman,*
126 East 59th Street, New York City.

Public Works

The new Committee on Public Works has had under consideration the resolutions passed at the last Convention on the subject of public works, and is preparing a statement to issue to the various chapters urging concerted effort on the part of the full membership of the Institute to inform senators and congressmen throughout the country of the importance of the architectural aspects of our public works and particularly of the importance of having an orderly program for federal work which will permanently displace the hurried appropriations at the end of a session which in the past have made up the Omnibus Building Bills.

Will every member of the Institute take the trouble to read over the resolutions published in the Proceedings of the last Convention, and get in touch with their senators and representatives wherever personal contact is available? At a later date more formal action may be taken by the various Chapters, but real results can hardly be obtained in Congress until a reasonable proportion of congressmen have become aware of the importance of the subject.

M. B. MEDARY, JR., *Chairman.*

Marginalia Architectura

A YOUNG MAN with a small portfolio of sketches seeks an interview with the Boss. He has been studying at a well-known Art School. He exhibits some fine and spirited drawings in black and white and in color. He has done some "commercial art" and shows a beautifully illuminated folder bearing the name of a prominent department store. But he has no job. He has come to an architect's office because he has been taught that architects are sometimes artists and always, always, interested in art. He knows how to make perspectives. He has some clever ones in his portfolio.

The architect, perplexed by his latest client's insistence upon certain luxurious details which must be somehow included in the house he wants without increasing its cost, is not in the best of humor with the world or with himself. He dismisses the young seeker of employment with scant courtesy. But he cannot get rid of the memory of the pathetically earnest, wistful look in that boy's eyes. He remembers a time when he too trudged from office to office, job hunting. In those days he had dreamed dreams about art. In those days he could draw very well indeed. By his parents and friends in the little town whence he came he was regarded as a genius in the bud.

But something had nipped the tender blossom. Fruit there had been, but it was not what had been looked for. He had succeeded in making a living—yes, a better-than-the-average living. He was an architect, no one seemed to dispute that. His buildings were useful buildings and were not so ill-looking. It was wonderful that they had not proven more ill-favored, for the demand of his clients had been not for better-looking but for cheaper buildings. As costs had soared, more and more had he sacrificed the pleasanter things in architecture. No more could he afford to admit the very young or inexperienced into his office. More and more he had to depend on a very few "high-powered" and ultra-efficient draftsmen. No more could he allow time to be spent stretching paper, working out everything in pencil, and getting all exactly right before tracing. Now there was no more tracing. Working drawings had to be made on the cloth and inked in with only a few guide lines in pencil. What chance for an artist in that office?

What chance for an artist anywhere in the average city? Main Street seems to have no more of the little studios which one remembers here and there thirty years ago. They were trivial and they produced some terrible hammered brass and "Kensington" work and still life, but they stood for some desire which seems to have ceased to be. Children used to be encouraged to "make things." Nowadays the same creative impulse is considered amusing until time for the child to go to school. In the routine of our educational process the creative impulse usually

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diminishes in inverse ratio with the advance through the grades. And yet, here and there it persists in boy or girl, and of this minority, it would seem, are those who are sent to an Art School. This is considered quite proper and as it should be. It is encouraged by the æsthetically inclined among the local intelligentsia. But only the hard-headed and practical ones ever give a thought as to what is to become of these children of vision when the Art School bids them go forth and earn a living. Ah yes! They can Teach. I almost forgot that in the eyes of most school boards anyone who has completed a normal school course and two years at Art School is fully qualified to teach all that the American child ever needs to know about "art." And so, young graduate, I should have sent you to the board of education. You are not to create but yours is to be the thin wine and the pale pleasure of years wasted in leading others down the blind alley through which you are to be an official guide.

What may Architecture do for the Allied Arts? Not much, I take it, as long as Architecture must needs be a mere lackey unto My Lord Business.

And yet, when we wandered among the students at the Corcoran during the intermissions of the last Convention program, and saw the earnest young faces, all intent upon the work in hand, all oblivious to everything but the Master's message each was trying to translate, did we not carry away some uncomfortable sense of our share in the responsibility for what was going on?

* * *

It was quite a shock to some of us to have so much time devoted at the last Convention to such a fruitless and academic theme as "What Is Precedent Doing to American Architecture?" It is reassuring to note that whatever Precedent may have been doing to American Architecture before the Convention it is still doing it. It is cheering to see that its resources are still undiminished. We recently observed in a metropolitan paper a picture of a new bank building, and we read:

"In choosing a style of architecture the directors sought to avoid the archaic appearance so common among bank buildings of today. The architect, Mr. So and So, made many sketches in different styles, and as a result the Spanish Renaissance was decided on.

"The free and vigorous character of this style and its adaptability to modern construction indicates that it will soon rival the Italian Renaissance in popularity."

A few days later a great New York daily described a new structure as being in "the industrial gothic style"!

There is something impressive about the versatility of the modern architect. Like the gentleman in vaudeville who takes, from the depths of a silk hat, now a rabbit and again an omelet, he is likely to produce, if his clients are sufficiently persistent, almost anything. It is fortunate indeed that the modern client is so reasonable, and that he never (or hardly ever) insists that the architect really Design!

* * *

Books by Richard Whiteing now out of print: *The Island, Number Five John Street, The Yellow Van* and *Ring in the New.* A friend may do no more kindly service than to share a rare book. It is a mark of highest confidence indeed when one is allowed to borrow a book which is out of print. There is a thrill of adventure about accepting the responsibility for its care and safe return. Who knows what may happen to it! And when there are four of them, all in one bundle, and they arrive at one's office, having made in safety a journey of a thousand miles, the feeling of trusteeship and the consciousness of a priceless charge is beyond words. On my way home with my precious package I am thankful that hold-up men usually do not care for books. I am very glad that the sky is clear and that there are no signs of rain. I keep such hold of that bundle of books that I am aware that certain fellow passengers on the crowded street car are eying me. Heavens! Do they think I am one? I assume a nonchalant air. I even take my hands away from the books reposing on my lap and make a great fuss about wiping my spectacles. The books start to slip to the floor. I grab them and drop my specs. Fortunately no damage is done, but I am visibly fussed and am very glad indeed when the car stops for me. I feel that I have a guilty look and that the other passengers are staring disapprovingly as I run the gauntlet to the end of the car and at last get off.

After dinner, with my pipe going nicely, and the other little creature comforts which add so much to a literary adventure are supplied—a cosy fire, warm slippers, a good reading lamp, a comfortable chair—I get real well acquainted with Richard Whiteing. I wish, though, that my friend who knew him first were there beside me. It would add greatly to be able to intone a fine sentence occasionally, to laugh together at a nugget of pure wit, to say "How true!" or something else equally banal—being human after all, and quite unable to voice adequate appreciation of such a mine of real enjoyment.

Richard Whiteing's books ought to be republished. Why are they neglected? I don't know. If I might guess, it is because he is unafraid of disagreeable truths. In the welter of modern fiction dealing with human frailty, chiefly sexual, there is always a sop to the shocked sensibilities. The proprieties may be outraged but habits of thought are never rudely disturbed—else the book ceases to be a "best seller." Richard Whiteing seems not to care for "habits of thought" or for anything but justice. That is the master theme of these four books. He satirizes nothing but our social sins against justice. Human hearts are sacred to him. He does not dissect them or reveal the deeply personal intimacies of their relations one with another. There is nothing in his work to please the erotically inclined. It is sturdy, wholesome, optimistic, bracing and brave. He seems indifferent as to whether or not you may like his story or agree with his point of view. He has launched his little ships on the sea of modern thought and they have sailed away as he intended that they should. He probably expected that they would be lost sight of and forgotten except where here and there in a quiet cove a lover of justice would give them safe harbor and perhaps allow them to take an occasional cruise to gladden the hearts of a kindred spirit. It pleases me to think of them thus and to be glad they have visited me. I shall send them back most reluctantly and shall hold in my memory all that I can of their sturdy spirit and charm. WILLIAM L. STEELE.

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The Question of Precedent

Afterthoughts

BOTH MR. Magonigle and all those who so felicitously collaborated with him, on that memorable May afternoon, in reading papers on Precedent in Architectural Design are to be heartily congratulated upon a consecutive and well-sustained literary achievement. Indeed, like many others who had the pleasure of listening to them, I kept saying to myself as paper followed paper: "It is not fair, he cannot keep up to that standard." And at length when Mr. Steele rose to read the last of the series, I was downright sorry for him, yet soon he, too, surprised me. Little by little he both surprised and delighted me, and when at length he reached his last line: "What of the dream, Beloved, what of the dream?" I realized with unbounded pleasure that it had been reserved for him to sound the highest note of all.

But since that agreeable afternoon I have read all of those papers, with many a chuckle to be sure, and with many a little gasp of pleasure as the humor or the grace of a well-turned phrase delighted me, but (how I hate to use that ugly little word) I must confess that I derived from their perusal far less inspiration and enthusiasm than I had expected.

Search as I would, I could find nothing definite, and practical, and modern, which would be of real use to me; nothing strong, bold and new which might inspire me to think out the problems before me with greater spontaneity and truth. No tocsin was sounded, no leadership was proclaimed with the glad confident sound of a new adventure in a new art.

There was, it is true, much altruism and many commendable allusions to our duty to our profession and to the public, but instead of gettting inspiration I read something "urbane, non-explosive and safe" from the bland New Yorker, whose paper came first, and who did not therein "sing out his soul," doubtless for fear of offending "the piker Pecksniff." Furthermore, I felt that "in the privacy of his bathroom mirror" he had been gazing at a conventional and safe man, who is "not unlovely and delightfully easy." And it thus seemed to me that, being so lovely and easy, so safely conventional, he had therefore decided it was prudent not to "dogmatize."

As I read on, my thoughts went back to the sound of each author's voice; thus, the orthodox voice from a great university sounded in my ears. With academic penetration and nicety it said, and said truly, "The public is in sympathy with work based on precedent," reminding me of the Methodist minister apostrophizing heaven with these searching words: "What is truth?" And after an impressive pause, during which he gave the impression of having received the answer from above, he answered with sublime conviction: "Why, truth is tri-uth."

Following that, and I hear it still, came the unfaltering sound of an ardent militant voice from the beautiful, unified past. "If civilization is chaotic," it is repeating the words with oh, such spiritual ardor, "ugly, fearful, unhappy and infidel, precedent will be called on at every juncture—but it will do little except add plausibility to artifice." Mark those last words! How true they are. What is truth? Why, truth is tri-uth. Now I hear it again. Like an echo from an ancient Gothic ruin, that ardent distant voice is now comparing us with the master-builders of the past, whispering dolefully: "We know more than they, infinitely more—except as to what things are worth knowing." And, lastly, sighing and moaning through the dark, damp vaults of a monastery which is so very different from the bright, warm monasteries which house a virile life and work today—the monasticism which is making so much out of a chaotic, ugly, fearful, unhappy and infidel civilization, this ghost of the Middle Ages, with an holier-than-thou air, is now confessing, with strange inconsistency, that, "If I have to create a monastery for Benedictine Monks, precedent is what I must build on."

Why? Is it because he prefers "to add plausibility to artifice," or is it because he shuts his eyes to the fact that American monks are used to modern buildings and because he overlooks the further fact that their leaders, ever looking to the future, always put progress before precedent in matters of architecture?

By this time the just and tolerant reader is saying, "It's easy to criticize, but could more inspiring or more practical papers have been prepared and read?" I think so, and in support of my belief allow me to give a concrete example.

Not so very long ago an architect submitte dt wodesigns for the new buildings for the Sacred Heart Academy at Madison, Wisconsin. The one, big, open, modern and obviously heated from a central plant; it also rejoiced in an elevator. The other, Gothic, small in scale, quaint and ecclesiastical in the ancient sense—verily "adding plausibility to artifice" in an heroic attempt "to recover the truth of old arts." But the Sisters would not have the obsolete affectation. They did not want the truths of old arts, but the truths of today. They wanted something fresh and new, and, above all, something which would give unmistakeable evidence of the strong influence of St. Dominic's teachings in the Twentieth Century, as well as in a land he had never heard of. Thus, the modern design was adopted and at once developed in an intensively modern spirit utterly without regard to architectural precedent. First, an office building tower (perhaps inspired by the tower of the loftiest business building in New York City) was designed high enough to dominate the countryside and big enough to provide each of the Sisters with a cheerful cell in groups, tier upon tier, each commanding a view of one of the beautiful lakes near the institution, and also each window commanding the buildings below in which the schools and dormitories were placed. Second, it was decided the color scheme of all the buildings should repeat the Dominican colors, should be taken from the striking habits the Dominican Sisters and Brothers wear—walls of rich cream colored brick, roofs of black slate and trimmings of white marble. Third, having learned that St. Dominic was the inventor of the Rosary, the architect thereupon decided that no reminiscent ornament should be used, but that each build-

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ing should be sparingly decorated with rosaries, holy medals and other attributes of the Dominican Order, thus evolving "a landmark in the great adventure" which will be unlike any built before. Thus, the composition of the buildings and tower will count more than even the Dominican color scheme or the Dominican ornament.

That is the way the same architect would go about designing a monastery for Benedictine Monks, were he given such a commission; for he believes in progress before precedent; indeed, he coined that phrase twenty-one years ago when it was adopted as the slogan of the Architectural League of America, while in the *Architectural Review* for June, 1900, I find that a certain R. A. C. wrote as follows: "Mr. George R. Dean's firebrand of an article on *Progress Before Precedent* is calculated to make trouble, as is proved by a score of comments published in this number, etc., etc.," which somehow leads me now to wonder whether in 1924 it may not cause some architects more trouble to think out a modern solution of an architectural problem than to "add plausibility to artifice."

But I hasten to add that I am glad that there are still some Gothicists doing church work in the same old way. Indeed, I often take off my old hat in the presence of the beautiful work of R. A. C. in particular, even if I do not believe in his point of view, while I am here glad to acknowledge that his voice is always raised on the side of things spiritual and beautiful.

But pleasant as are his ringing words, for their literary quality, if not for their architectural truth, and grateful as I am to him for his delightful contribution to that symposium, the program proceeds; and now I am listening to a progressive from the Middle West, whose ideas are indigenous to America and as modern as the Twentieth Century—a man who believes that architecture "will win greater authority and command a greater popular interest" if it is more straightforward; who desires an architecture "that shall speak of our own time, rather than of ages past." As I listen it seems to me that his wish for "a freed imagination guided by deep insight into the spirit which has imbued the great art of the world," justifies the statement sometimes heard that the most creative ideas of the country come from the Middle West. But good as his paper is, it unfortunately points to nothing definite and concrete.

The last reader is now facing his hard task with a beautiful modern poem up his sleeve to cap the climax of the whole afternoon. He is an avowed disciple of the late Louis H. Sullivan, a master who offended his contemporaries by daring to think. Mr. Steele looks, as he starts to read, as if he feels his task hopeless, yet he does not falter, for he has that poem and also some apt quotations to fall back on, which give him courage. "In our occasional moments of humility and absence from professional pose some of us admit that we are traveling a road that leads nowhere, as far as art is concerned." What modesty! It certainly does not sound like the Middle West, yet it is a breath of fresh and invigorating air from the wide Prairies. Unlike the Gothicist of bygone days, he dwells on "little points like utility and convenience." How crude! How soulless! Timidly, he is now asserting: "Utility and Convenience are humble servitors in the court of Beauty, but they may not be safely ignored, for they belong there."

"Throw the heretic out," comes over the radio, for R. A. C. has been listening in, not having had time to remain through to the end of the session. Fortunately, no one else heard him, for the Convention is completely absorbed by the modest man on the platform. "At best the original beauty that dwelt in the buildings from which these are stolen is here only in the same unsatisfactory sense that it exists in any copy of a work of art. At worst the original beauty is gone, and all that is left is a sense of the unintelligent use of forms alien to the purpose at hand."

At present there is such a hissing and squeaking of the radio instrument that the Chairman is struggling to disconnect it, though the words "infidel and heretic" are blended in with the reading of a quotation from *The Freeman* and something about "a newtime spirit." Now there is complete silence as Mr. Steele begins to read "The Figure Head Speaks."

The symposium is over; but why, oh, why didn't either Mr. Willcox or Mr. Steele drive the nail home? Why didn't one of them give us a symbol—give us something definite and helpful and inspiring to take away with us, to study and to follow?

If one of them had only said, for example, "American architecture is having a rebirth in the Middle West. With the building of the Nebraska State Capitol we have a concrete example of modern thought in architecture. By building a tower to dominate even the most brazen of privately owned office buildings, its architect has demonstrated the fact that government may still compete with big business; and, further, by making the entire design fresh and new, both in its mass and details, and by adorning its tower with helmeted American soldiers wearing up-to-date helmets such as the crusaders of the Middle Ages never dreamt of, this building now stands as a living example of our victorious belief in the ultimate development of a purely American architecture."

ALBERT KELSEY, F. A. I. A.

From Our Book Shelf

The Business of Architecture

"This is an attempt to evaluate architecture in America in terms of our civilization. I have not sought to criticize particular buildings or tendencies: I have tried, rather, by approaching our modern problems from their historic side, to criticize the forces that from one age to another have conditioned our architecture, and altered its forms. Lest my purpose be misunderstood, I have left out illustrations; for a building is not merely a sight; it is an experience; and one who knows architecture only by photographs does not know it at all. If the omission of pictures lead the reader occasionally to break away from the orbit of his daily walks, and examine our development in cities and buildings for himself, it will be sufficiently justified."

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Thus Mr. Mumford[1] sets himself no small task. Not in the same way, but to much the same purpose have others set themselves aims in dealing with matters architectural and in writing architectural histories. But evaluation, whether it be in terms of this or that, turns upon the point of view under which facts are handled. To evaluate architecture from the viewpoint of the architect is one thing; to evaluate it from a viewpoint which lies without the field of a vocational interest in the subject is something else altogether. The value of Mr. Mumford's point of view, I think, is that it lies outside a professional interest; it commands, so to speak, more of the scene. It is a point of view from which an adequate theory of architecture may be developed.

This is not to imply that no architect has been able momentarily to break the bonds of his vocational interest and look at architecture, ancient and modern, and the work that engages him day by day, from such a vantage ground. A few may be counted; and I suspect that if a count were taken following a general reading of this volume, which will be looked upon by many as thoughts which should remain unspoken, it would be found that a very large number view architecture and their work from Mr. Mumford's side of the frontier. Certainly a large number—an ever increasing number, I believe—will find themselves in agreement and will give thanks for this volume of history and criticism. By the same token there will be others who will be provoked by it—very much provoked.

And that will be a pity. For the value of his keen observations turns upon their being accepted as evidence—simply evidence—that things—buildings, architecture, vocational interests and activities of architects, processes of production and fabrication, processes of vocational education, processes of "stimulating appreciation" —are not at all what they seem to those whose habits of thought revolve within the limited field of a business-like interest in architecture.

Much as I regret it, I cannot bring myself to brief the volume: that would be unfair to the author. For the first five chapters which deal in turn with *The Medieval Tradition, The Heritage of the Renaissance, The Classical Myth, The Diaspora of the Pioneer, The Defeat of Romanticism,* confined as they are to some ninety pages, are too compact and too significant to admit of that treatment. In these chapters which cover the American scene from the beginning to 1890 the author develops a truly genetic account, I think, of how things architectural in America took shape during that period.

Those who have not examined the sources of information—taken account of how those early communities organized life—can hardly be aware of how wide is the gap which separates them from the communities of the present with respect to the habits of thought which gave rise, through conditions of work and ownership, to their form and arrangement and the character of the buildings which they contained. For those who have examined the sources of information have returned with little more than rationalized accounts of their own preconception of the genetic account. So there is need of this account to clarify and dispel the fog of myths which conceals that period.

No more penetrating inquiry has been launched, I think, than that which covers the period of rapid change which followed the early architectural and community planning experiences of New England and ended in the World's Fair of 1893. In these chapters we are made aware of how completely detached must be the point of view, how wide must be the angle of vision that the entire scene may be comprehended to the end that a genetic account may be rendered. The pity is that architectural historians have rarely gone sufficiently far afield for their point of view; they have not brought into their account of how things architectural developed a sufficiently large group of factors to make the story complete.

If want of contact with sources of information covering the period prior to 1890 should lead one to question Mr. Mumford's account and evaluation, certainly we are all near enough to the periods 1890 to 1900, covered under *The Imperial Façade,* and 1900 to 1910, covered under *The Age of the Machine,* to warrant criticism of his account and his observations. But even so, his detached point of view has an advantage, and he may see more clearly than those technically interested; for the significant point is, after all, not merely the relative merits of this and that structure viewed in a limited vocational sense. The question is: What do all these modern structures and these modern communities mean? This question is answered in his criticism; and the function of the modern architect is disclosed in the course of his inquiry.

Great as the architectural product of that period will be rated by many in the sense of volume and magnitude of buildings and communities, great as it may be rated in a technical vocational sense, there remains that about the quality and character of it all that may fairly be said to cancel the value of what has been accomplished. For the modern community has become in many respects utterly barren; the industrial system has rendered life in these modern communities arid and utterly incapable of sustaining the instinct of workmanship and so nourishing æsthetic impulses, which flower only upon that root.

From a consideration of the factors involved in the late 90's, the author passes to the last phase of the historical narrative and deals with the machine. Not a little is said by way of disparagement of the machine: and little that is stated may be denied. But in dealing with the machine and machine industry and their bearing in the case of architecture and the modern community as a whole, the author does not sufficiently stress, it seems to me, the importance of another factor which certainly is conspicuous in the field of vision from whatever point of view.

Coincident with the introduction of the machine as an economic factor, destined to work accelerating revolutionary changes in industry and in every phase of human thought and action, appeared an institutional change—the introduction of credit economy and the rise of absentee ownership, destined also to work revolutionary changes of like magnitude. That the economic factor, the machine, and the institutional factor, credit and absentee ownership, have mutually operated to shape the course of recent events and so give form to our environment, that

[1] *Sticks and Stones: A Study of American Architecture and Civilization.* By Lewis Mumford. Boni & Liveright. 1924.

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these two have now achieved a dominant position consequent upon the condition that one factor has served to augment the effect of the other—of that there can be no doubt. But it does not follow, as some hold, that one may be viewed as a derivative of the other, or that the two, by their nature, are inseparable.

It was by historical accident that the machine came into the case during that short interval of time when the workman was losing control of his tools through the operation of the new institutional factors referred to. The upshot of this conjuncture of events was the utilization of the machine from the very outset under the guidance of "business principles" rather than under the guidance of the instinct of workmanship. Thus far there has been no opportunity to utilize the machine in a purely technological sense—in the sense that the workman in the era of handicraft utilized his tools. What might have been the outcome of the introduction of the machine and the development of the machine industry under a totally different set of institutional auspices would be a matter of speculation, of course. But this theoretical point cannot be dismissed offhand for that reason. For any realistic effort to deal with the problems discussed by the author in this and the final chapter involves a decision which turns upon this speculative point. We may attempt the abandonment of the machine as in the case of several wistful moves in the interest of a return to handicraft. Or we may attempt to change the institutional factors.

But time and again in the course of history peoples have set out courageously to modify their institutional scheme to meet a new set of material factors that have come into the case, but more often than otherwise the institutional factors have not been changed, with the result that out of the stress occasioned by the discrepancy between the material factors and the outgrown institutional scheme has followed decay of both industry and culture.

This parenthetical comment anticipates, in a sense, the discussion contained in the final chapter *Architecture and Civilization,* in which the principal elements of our heritage are examined in order that the problem which confronts the architect and those engaged in the work of community and regional planning may be stated. Needless to say, the nature and magnitude of the problem as set out by Mr. Mumford is of a different order altogether from that which is suggested by the run of current articles in our periodicals, our committee reports and recommendations concerning public education, vocational education and what not which, with rare exceptions, are so safely and sanely phrased as to be harmless and worthless. How thoroughly is the author aware of the nature and magnitude of the problem may be suggested by quoting his closing paragraph:

"Home, meeting place, and factory; polity, culture, and art have still to be united and wrought together, and this task is one of the fundamental tasks of our civilization. Once that union is effected, the long breach between art and life, which began with the Renaissance, will be brought to an end. The magnitude of our task might seem a little disheartening, were it not for the fact that, 'against or with our will,' our civilization is perpetually being modified and altered. If in less than a hundred years the feudal civilization of Japan could adopt our modern mechanical gear, there is nothing to prevent our own civilization from recovering once more its human base—nothing, that is, except our own desires, aims, habits, and ends. This is an ironic consolation, perhaps, but the remedy it offers is real."

Following the text are several pages, *Notes on Books,* which should not be overlooked. For here the attention of the reader is called to a number of books and articles, many of which will be found to lie somewhat outside of the field of thought covered by the architect's reading, although they deal with a variety of matters which probably concern him and his work much more vitally than do those that fill his library shelves.

FREDERICK L. ACKERMAN.

A Correction

In my article on *The Imperial Age* in the August number of the JOURNAL I unwittingly did an injustice to Mr. Charles McKim; and through the courtesy and patient effort of Mr. E. H. Anderson, the director of the New York Public Library, I am now able to correct it. I had gathered from Mr. Granger's life of Mr. McKim that there was a conflict between Mr. McKim's æsthetic conception of what the library building should be and the conditions laid down by the trustees, and that Mr. McKim was not willing to sacrifice his design to purely utilitarian requirements and so had "indignantly withdrawn" from the competition. Whether I misread the intention of Mr. Granger's explanation (pages 20, 21) or whether Mr. Granger himself was not in full possession of the facts, I do not know; at any rate, Mr. Anderson had kindly informed me that Mr. McKim did not withdraw from the competition, neither was he excluded; but that, in fact, he stayed to the end and was awarded third place. These facts are shown by the official records of the library. Since this error came to my attention at too late a date for correction in the first printing of *Sticks and Stones,* I trust that the present amendment will reach the eyes of everyone who has read *The Imperial Age.*

LEWIS MUMFORD.

A Master of Architecture

Inigo Jones[1] has always been a name to conjure with in England. The first great designer on classic lines to appear in England, he practised in the early 17th century, two hundred years after the classic revival in Italy. As compared with the present all ideas move slowly in the middle centuries; Mr. Ramsey says Venice was fifty years behind the rest of Italy. England, however, was peculiarly late in adopting the Classic mode, for, when it reached England at the end of the 15th century it had but a brief reign, and was ousted by the attitude of Henry VIII towards Rome. It was a hundred years later before it came to stay under the inspiration of Inigo Jones. It is interesting to think that Jones saw Italy when the

[1] *Inigo Jones.* By Stanley C. Ramsey. Chas. Scribner's Sons. The first of four volumes of "Masters of Architecture." The series is edited by Stanley C. Ramsey, and the opening monograph on Jones is by him.

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days of its architectural greatness were over, and its great architects dead; and at a time when Italy was not reverently following its great masters, but having an orgy or riot of distorted imagination.

American architects are sheep; once a leader starts a style, it is at once taken up and followed *ad nauseam* until something takes its place. So came and went Romanesque, and the picturesque, and the Louis XIV, and the Adam brothers and Collegiate Gothic. No such temper was in Jones; he saw, not the Italy of his day, but its great past, and he came back to England a mature artist, to embody in stone his own conceptions, based, it is true, on Palladio, but drawing freely from Palladio's sources and also from the great period of Roman architecture.

He was not a copyist, nor a plagiarist, but a creative designer, with a rich background of the Italian Renaissance, and of early Rome; and, given his surroundings, his times, and his opportunities, he created some very fine things. Mr. Ramsey is enthusiastic, as are most Englishmen, over Inigo Jones. He and Wren stand out head and shoulders above everyone else.

It is not, however, profitable to attempt to compare and contrast the great men who have been our predecessors and our masters. It is useless for Ramsey to say that Jones was incomparably a greater architect than Palladio, but is both interesting and valuable to read his clear cut statement of the different qualities in Wren and Jones. "In all Jones' buildings there is the civic or urban note" . . . "in all Wren's we find the domestic touch." That is keen analysis. It is that Wren quality, the domestic touch, which has caused English architects to fall short in monumental work, and to be so perfect in other work.

It is a delightful essay, and a noble tribute to Inigo Jones. There are 35 illustrations covering all of his important work, including the baroque Oxford porch, which one hopes he did not do, and Raynham which could hardly be uglier or more unworthy of a great man. But, when all is said, he was a marvelous man for his age and time. He could see Italy and be uninfluenced by its strong retrograde movement, he could come back with Italy's great period inspiring him and build things which are unmistakably and essentially English. It takes a big man to do that.

R. Clipston Sturgis.

A History of Interiors

The author of *Great Styles of Interior Architecture*[1] is an architect with European as well as American training and he writes with authority and conviction, fully utilizing the logical powers of analysis, which a professional point of view implies, to lucid and at times delightfully charming appreciations, summations, and judgments of the various architectural epochs into which he has, for convenience and not without historic justification, divided his discussion. As the field of interior architecture is vast, he has imposed limits upon his exposition of it by eliminating all Gothic and religious architecture, which in his opinion have already been abundantly and sufficiently described.

Thus the theme becomes an exposition of the growth and progress through other countries of a phase of the Italian Renaissance, an interesting and essentially human phase: its interior domestic architecture. One sees arranged for the first time in orderly sequence the *milieu* in which society of other days lived; one sees what each period valued as beauty and adornment in its surroundings; one sees taste and fashions changing, simplicity becoming complexity, beauty taking ever new manifestations. It is a stimulating and exciting chronicle to any whose imagination delights in seeking historic parallels and relationships. If the imagination of the reader is not stirred, of what avail is a book?

In language that is, as it were, elastic and joyous, free of all semblance of aridity, the author discusses seriatim the Mediæval Italian Style, the Renaissance in Italy, the Renaissance in France, Tudor and Jacobean Manor Houses, the Baroque Style in Italy, the Style of Louis XIV, the English Style of the Late Stuarts, the Style of Louis XV, the Georgian Style, the Style of Louis XVI, and the Empire. One hundred and seventy illustrations accompany the text and are woven into it by reference so skillfully that text and illustration become alike illumined.

And thus architecture is made intelligible. It is now no longer esoteric, clothed in technical language, dry as dust; but understandable by all—a chronicle of man's ideals, customs, aspirations and attainments, through four centuries. Here indeed is a story with human interest, if the author have but vision and power to put it across the printed page into the consciousness of the reader. Can the sluggard be roused to wonder at the intricacy of man's incessant quest for beauty? The variety of its manifestations? Can his fancy be made to take fire by contemplating this adventure of the human spirit? Battles and pestilence whet the adventure, scourge and destroy, but the desire for beauty will not die.

Its flaming torch this author holds aloft to illumine his analysis of the elements of design which compose an interior. These are walls, ceiling and floor; doorways, windows and fireplaces. Out of these six elements all the infinite variety of interior architecture is made. The mystery of the electron is duplicated. Walls are shown changing from the plain plaster surfaces of the mediæval period, sumptuously ornamented with painted arras, designs, and frescoes, to highly organized surfaces with pilasters and columns of marble and painted plasters, to paneled surfaces of wood, with carved mouldings and ornament, playful and gracious, the style of Louis XV. The development of windows and doors is likewise followed, and the growth of furniture from the simple bench, stool and chest, which comprised a sufficient household equipment in mediæval days, to the countless forms and varieties, so highly differentiated, of today is traced. The history of each new form and the date of its appearance are given. Thus one follows the growth of luxury and ease, resultant of increased security of life and mobility of goods and people, through study of the shape of chairs; or, if that path be too broad, through the

[1] *Great Styles of Interior Architecture with Their Decorations and Furniture.* By Roger Gilman. Harper & Brothers.

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study of the coverings of chairs, leather, damask. Verily, truth is in every trifle.

To show the charm of the author's style and the sureness of his judgments I quote from the Style of Louis XV:

"The proportions of these rooms must be smaller and lower, for intimacy; the panels must be slender, for elegance, and so the verticals must run sheer from dado to cornice and even be doubled for emphasis, while the horizontal lines must exist hardly at all. The scale must be very small. One must avoid too much dignity. The world is bored with the superhuman effects of Versailles. One is fond of trifles, has time for little details —if only they are supremely well done." And concerning the furniture of this epoch—"But how is it possible that furniture of such informality, of so many curves, designed for such a special society, can still hold its place? Simply because its character and its forms were so successfully designed for personal use. Its informality is still pleasing, its curves are still comfortable, and both seem to fit weary or luxurious humans. If the interior architecture of Louis XV failed in its full purpose, the furniture succeeded, it still lives on, if not in its identical forms, yet in the shape of many a modern table and chair of kindly curves and easy intimacy."

I refrain from further quotations and refer the reader to the book where he will find equally just and apt appreciations of the other phases of the Italian Renaissance as it swept over France and England and was modified by those countries and converted to their different social needs.

WALTER D. BLAIR.

Letters to the Editor

Pecksniffs

TO THE EDITOR OF THE JOURNAL:

A most edifying piece appeared some time ago in one of the professional journals, which undertook to conduct a symposium having for its title, *The Library of the Architect.* A selected group of prominent practitioners was interviewed and each solemnly delivered himself of what constituted the ideal professional five-foot shelf. Seldom is one so depressed as by these answers, seldom does one read such bunk. These men, interrupted in the midst of drafting plumbing specifications, were apparently so flattered at the novelty of having their opinion asked about anything more cultural than grease traps that they become on the instant didactic and edifying.

And what books did these pundits urge an architectural draftsman to study in order to get ahead in his work? Did they recommend Metcalf on Sewage Disposal? Cosgrave on Plumbing? Trautwine's works, or Kidder's? Anything about concrete or steel construction? Oh, dear no! Nothing like that. The proper books, it seems, for a draftsman to dig at in his spare time—and to the diligent study of which we must infer the gentlemen in question owe the excellencies of their own banks and high schools—are such books as Vitruvius, Hamilton Wright Mabie, Victor Hugo, John Dewey's *Reconstruction in Philosophy, The Life of Savonarola,* Herodotus, Xenophon, Motley's *Dutch Republic,* Maurice Hewlett, Cellini's *Autobiography,* Froissart's *Chronicles,* Phillippe de Commines's *Memoirs, History of Egypt,* Dion Cassius, and so on.

One urges "books on modern science, on astronomy, on modern chemistry." The Bible is recommended more than once and "books on the Evolution of Religion." One gentleman says, "a sense of humor should be cultivated, and Mark Twain can contribute to this phase of life, and he is a fine stylist." Of course, there were plenty of other works suggested that contain plates, and names of men like Ruskin and Viollet-Le-Duc, who wrote theoretical essays on architecture. But not half the books advocated had even this aloof relation to plans and elevations, and I think not a single one had to do with any of the innumerable details of actual construction, equipment, and furnishing of a modern building.

Is this being quite honest with the earnest apprentice? *Do* our buildings owe a great deal to a reading of Herodotus, or Maurice Hewlett, or Phillippe de Commines? Can one tell by the buildings one sees up and down the street, which were by architects who were well grounded in their Hamilton Wright Mabie and Xenophon? Does one pause and shake his head sadly before some façade and say: "He is weak in his Froissart"? One is cheered and emboldened to make these remarks by the fact that the two best architects, by common consent, among those quoted, gave none of these ancient best sellers in their lists, but rather books of illustrations and building information almost entirely. In their minds apparently the way to study architecture is to study architecture.

Remember, general culture is not being discussed. They are attempting to tell the draftsman how to learn more about planning, designing and getting buildings built and equipped in 1924.

One hopes wistfully that there are somewhere architects who have read with pleasure and appreciation a goodly proportion of all the works mentioned and who would yet have the frankness to say that they have been helped by them in their architecture, not at all. A. W. J.

The Beaux-Arts Competition

The first preliminary competitions for the 18th Paris Prize of the Beaux-Arts Society will be held on 3 January, 1925. The winner of this competition receives $300 quarterly, for two and one-half years' study in Paris, where he is given the privileges of study in the first class of the Ecole des Beaux Arts. The competition is open to all United States citizens under 27 years of age on 1 July, 1925, without any other qualifications. This competition may be taken in any part of the United States. Further information will be furnished on application to the Chairman, at 126 East 75th Street, New York.

Exhibitions

THE annual exhibition of the Chicago Architectural Exhibition League will be held in February, 1925, in Blackstone Hall of the Art Institute, Chicago, after which it will be forwarded to the National Exhibition in New York City in April. Drawings will be received until 20 December. Entrance blanks may be obtained from Pierre Blouke, 721 North Michigan Avenue, Chicago, Ill.

THE large collection of architectural drawings and photographs assembled by the late Russell Sturgis of New York City has been presented to the Department of Architecture, of George Washington University, District of Columbia, by Mrs. D. N. B. Sturgis, his widow.

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New Members Elected

BOSTON: Edward B. Stratton; CENTRAL ILLINOIS: Loring H. Provine, *Urbana;* CHICAGO: Raphael Nathan Friedman, *Chicago;* George Leanard Lindeberg, *Maywood;* CLEVELAND: Robert Peal, Romer Shawhan; NEW YORK: George Fulton, Hubert Douglas Ives, Paul F. Jaquet, Charles G. May, Andrew Reinhard, *New York City;* Monroe Stern, *Mt. Vernon;* NORTH TEXAS: Lester Nichols Flint, *Dallas;* PITTSBURGH: Emmett J. Hatcher, Anthony A. Kauzor, Victor A. Rigaumont, Walter H. Stulen, *Pittsburgh;* R. G. Howard, *DuBois;* J. E. Adams, *Johnstown;* Sidney H. Brown, *Swissvale;* John F. McWilliams, Jr., *Wilkinsburg;* SAN FRANCISCO: Louis Edward Davis, *San Francisco;* Ralph A. Fishbourne, Arthur Reynolds, *Honolulu, Hawaii;* SCRANTON—WILKES-BARRE: Donald F. Innes, Charles L. Levy, *Wilkes-Barre;* SOUTHERN CALIFORNIA: Franz Herding, *Hollywood;* Robert D. MacPherson, Henry C. Nickerson, *Los Angeles;* WASHINGTON, D. C.: William Vaughan Cash; WASHINGTON STATE: Joseph H. Wohleb, *Olympia;* WEST TEXAS: Dahl Dewees, Carl A. Mulvey, Raymond Phelps, Malcolm G. Simons, Beverly W. Spillman, *San Antonio.*

Junior Members

Louis Skidmore, *Boston, Mass.;* James A. Spence, *Saginaw, Michigan;* Nelson B. Mead, Jr., Albert George Clay, *New York, N. Y.*

Current Activities

SCIENTIFIC RESEARCH DEPARTMENT
STRUCTURAL SERVICE COMMITTEE

SAFETY CODE FOR ELEVATORS: The final draft of the proposed Safety Code for Elevators, being prepared under the procedure of the American Engineering Standards Committee, has been completed and sent to the members of the Sectional Committee for approval. The Institute is represented on this Committee by Mr. S. W. Jones and Mr. S. F. Voorhees.

FIRE TESTS OF MATERIALS AND CONSTRUCTION: Mr. Louis A. Walsh has been appointed to represent the Institute on the Sectional Committee of the American Engineering Standards Committee on Fire Tests of Materials and Construction. Several meetings of the Sectional Committee have been held, and many of the more technical details have been tentatively decided upon. The proposed code will provide for uniform methods of testing for the fire resistive qualities of materials and construction to the end that results obtained by different testing laboratories will be comparable.

HEAT TRANSFER THROUGH OUTSIDE WALLS: At the last meeting of the Committee investigating the subject of Heat Transfer Through Outside Walls, it was announced that this subject had been taken up for investigation by the Division of Engineering of the National Research Council. It was decided that the present committee should be continued as a co-operating body with the Council should represent the interests of the manufacturers on various sub-committees.

Obituary

Joseph Howland Hunt

Elected to the Institute in 1915

Died at New York, N. Y., 11 October, 1924

Joseph Howland Hunt, son of Richard M. and Catharine Clinton (Howland) Hunt, died, after a brief illness, in his fifty-fifth year. After graduating from Harvard in 1892, he spent two years in his father's office, and five years at the Ecole des Beaux Arts, in the Atelier Daumet-Esquier. His friends of this period well remember the contagious enthusiasm, tireless energy, and cheerful camaraderie with which he threw himself into the work of the school, and the life of the quarter, as well as the thoughtful and sensitive quality of his architectural work. Shortly after his return to New York in 1900, he was taken into partnership by his elder brother, Richard H. Hunt, who had succeeded to the practice of their distinguished father—the new firm name being Hunt & Hunt.

Hunt's work from the start was characterized by thoroughness, good judgment, and good taste. Among the buildings designed by his firm, in which he was especially active, are the 69th Regiment Armory, the residence of Amos R. E. Pinchot, the "Marble Twins," No. 645-647 Fifth Avenue; the New York and Newport residences of Mrs. O. H. P. Belmont, the Old Slip Police Station, the residence of H. J. Fisher at Greenwich, Conn.; Williams Hall and the Alumnæ Building at Vassar College, the Belmont Memorial Chapel in Woodlawn Cemetery, and an important group of buildings in Jamshedpur, India, for the Tata Iron & Steel Company. Some of these he designed in India, spending eight months there for that purpose, and making himself most of the working drawings.

He was a Director of the Municipal Art Society from 1916 to 1924 and its President from 1919 to 1923; First Vice-President of the National Sculpture Society from 1921 to 1923; Secretary of the Fine Arts Federation from 1904 to 1916; Treasurer of the Architectural League of New York from 1912 to 1914; a member of the American Institute of Architects, of the Society of Beaux Arts Architects, and of the Metropolitan Museum of Art.

Few men have had more devoted friends or more admiring acquaintances, and few have known so well how to enjoy friendship and to inspire the same feeling in others. His was a chivalrous nature, with a high sense of justice and honor, generous and kind—*Le Bon Chevalier, sans peur et sans reproche.*

I. N. PHELPS STOKES.
JOHN MEAD HOWELLS.

Richard Montgomery Schell

Elected to the Institute in 1912

Died at New York, N. Y., 28 July, 1924

Richard Montgomery Schell was a graduate of the School of Architecture, Columbia University (1895), and was best known to those members of the New York Chapter who attended the University at about that period.

He practiced architecture in several offices until 1899, when he entered into partnership with Wm. P. Bannister, which continued until his death.

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Mr. Schell's early works—largely for charitable institutions—were buildings to the cost of which he was a very large contributor: chapels, a gymnasium, several small houses and finally a Republic Inn at Freeville, N. Y. All this work was his contribution to child welfare. In his business association his practice was general; he was intensely interested in the problems of plan and concentrated his mind on solution regardless of his own comfort.

Mr. Schell was never active in the affairs of the Institute but was always ready to render his support in his quiet way. The financial problem was never one which he had to solve but he worked hard at his profession from pure love and appreciation. His interests in life were not confined to his work as an architect. He was an accomplished musician and his studio was the place of many little musical combinations. He was a pupil of Carl Hahn the 'cellist, and a member of the Musicians' Club, the Columbia Club, the D. U. fraternity, and other societies connected with the University. He was a trustee and one of the founders of the George Junior Republic, and active member of the Finger Lakes Association which has to do with the preservation of the natural beauty of our state lakes. He was interested in the Women's Branch of the City Mission Society, the Northfield Seminary and the Masonic Fraternity.

Mr. Schell's great work in life was in the rescue of the unfortunate. He assumed great burdens in service and wealth that others might lead happier lives. Children from the lowest levels of society, both boys and girls, found high places in life with the aid of his helping hand and self-sacrifice. Each day brings to light someone who was helped over the barriers by him. The last few years of his life were years of suffering but the joy of service helped him to bear all. His sister is the only one left of his immediate family.

WILLIAM P. BANNISTER.

Eugene Hartwell Taylor, F.A.I.A.

Elected to Associate Membership in 1884
Elected to Fellowship in 1889
Died 29 October, 1924

A familiar figure at the Institute Conventions, an architect of the "old school" in all that was best and most worthwhile, and a loyal Christian gentleman, Eugene Taylor has gone. He had reached an age when retirement from active work may usually be expected, but he was still actively engaged in the practice of his profession. He did not consider himself an old man. His venerable appearance and rather frail physique made him seem older than he really was. He was sensitive to any imputation, real or fancied, that he needed to relax his efforts and husband his strength. He was willing to serve and anxious to be allowed to match his capacity for work with the youngest and most untiring.

Mr. Taylor received his technical training in the Massachusetts Institute of Technology. His was a retentive mind and he prided himself on the freshness of his memory for his early studies. He was a student and a painstaking and a careful one always. His was the encyclopedic rather than the creative spirit. He hungered after knowledge and would have made a teacher in type similar to the beloved Ricker at Illinois.

He was helpful to the young men in the profession. Although some of them were guilty of small respect for what they considered Taylor's "old fashioned ideas," they respected him and were influenced more than they realized by the quiet force of his example.

The great love of his life was his profession, and he worshipped it as it was personified in the American Institute of Architects. No matter what breach of ethics might be committed by a member Eugene Taylor never found fault with the Institute. Its conventions, no matter how dull they might seem to the less reverent, were to him always occasions of inspirational stimulus.

The IOWA CHAPTER, as the local embodiment of the Institute, was very close to his heart. He practically founded it. No other had so much to do with its inception or with the careful nursing which the Chapter needed for so many years. He served as its Secretary and Treasurer for almost twenty years. He often asked to be relieved in the hope that by shifting the burden other shoulders might be found equally strong and willing. But as time after time his request was denied and he was re-elected, his quiet smile gave evidence of the happiness he felt in the thought that his services were valued.

He lived to see his professional attainments often set aside for ability of more surface glitter. His quiet unwillingness to advertise himself commercially handicapped him in the competitive scramble. His retiring, home-loving disposition put him at a disadvantage in the later years of his life when architects were all joining country clubs, dinner clubs, and lodges galore.

He had a keen sense of the responsibility which the professionally minded man always feels. Against his own material interests he would speak his mind when he thought that mistakes of a civic nature were in danger of being made. He worked unselfishly in the interests of his community, and was one of the founders of the first society in his city which had for its aim "Civic Improvement." He was a member of the Zoning Commission.

His influence was felt in many directions. To his authorship is principally due the little circular on the *Functions of the Architect* which the IOWA CHAPTER published and distributed for many years. His friends were legion, and now that he has gone, will mourn him, especially because his reserved, austere demeanor made difficult the expression to him of their love and esteem. He seemed not to want nor to need human praise or approbation, and yet we know now that he did want it and did need it, and often suffered for the lack of it.

May it be that in the great Scheme of Things, the Master Builder has taken this faithful and humble friend and given him eternal comfort and joy in all the things for which he worked and longed for during his unselfish and busy life. May the young men of Iowa, especially, be grateful for the memory of one who was their friend, their counsellor, their elder brother, and may they honor him by honoring the ideals which to him were sacred and lovely.

WILLIAM L. STEELE.

DEPARTMENT OF ARCHITECTURE
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The Allied Architects Association of Los Angeles—V

ALL AROUND us, and too often overlooked, are the younger men who will soon shoulder our responsibilities in the development of the art of architecture. To them is left the inheritance of a wealth of material, structures of the present and the past. These Works in Architecture are their textbooks to be studied with understanding and appreciation. To help the student to translate these messages and to choose with discrimination the best examples for study is a duty for the profession.

In all branches of education there is a marked tendency to cultivate the influence and seek the guidance of those men who have achieved distinction in their particular field of endeavor, and in several of the important architectural schools throughout the country the policy of maintaining a closer contact with the practising architect and architectural practice have stimulated and improved the work of the student. After all, who can better teach architecture than the architects themselves?

The members of the Allied Architects Association of Los Angeles, with a sincere determination to advance the art of architecture, have individually made an effort to encourage and assist in instruction in architectural training, and it has been the hope and desire of all that this effort might some day be organized and synchronized to the end that the instruction in architecture might be carried on with a continuity of purpose and a constant adherence to the highest ideals of the profession. Recently a definite opportunity came to this Association to combine the services of its members to guide and develop such educational work.

The architectural department of one of the largest universities of the Southwest found difficulty in keeping pace with its growth in numbers. In this contingency it seemed quite natural that the Allied Architects Association of Los Angeles should be consulted. As a result, a working program was devised in a very few weeks to permit the Department of Architecture to function more effectively. First, the Board of Directors of the Association named a committee of five members who, after consultation with the president of the university, were appointed by the university as official advisors. This committee studied in detail all the conditions affecting the department, and promptly made recommendations which were put into actual operation. The most important of these recommendations was the establishment of closer relationship between the students and the architects of the community. Plans were perfected, which call for a series of problems in design for the upper classes and for each one of these problems a member of the Association is chosen to supervise its development. When the programs for the projects were distributed to the students there was an undeniable increase of enthusiasm, as the subject was presented with a few appropriate remarks by a well-known practising architect. Occasional visits to the drafting room with criticism and advice tend to increase the interest of the students, produce more intensive work and maintain a more definite adherence to the project. The presence of members of the Association at the judgment and announcement of awards makes this procedure a ceremony.

The second recommendation suggested more direct contact between the students and actual drafting room routine. So it has been arranged that the senior class in design of this department do its drafting work in quarters adjacent to the drafting room of the Association. The propinquity of this carefully selected corps of assistants will have a decided effect on the students who next year will go out into business life. They will glimpse the real problems of the profession, and will be better equipped to take their positions in the architectural work of the community. The quarters which they are using are accessible to many architects and many draftsmen. Already this move has been justified by the frequent sight of a student and a well-known architect bending over the same drafting board.

The Production Department of the Association is being made more and more a center of architectural interest. Here the Architectural Club of the city has taken up its new quarters, and with it, the Atelier taking the Beaux Arts problems. So it has become possible to concentrate many interests of the profession for the convenience and benefit of all. It makes available Library service, formal and informal meetings and the dissemination of information. It is believed that the results will be an enduring example of the principle of collective service, which is the foundation of this Association, and, as time goes on, a splendid influence will be felt by the work of all these men working for a common cause.

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Structural Service Department

LEROY E. KERN, *Technical Secretary*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

The Status of Domestic Oil Heating (30g1). (*Journal of the American Society of Heating and Ventilating Engineers. Discussion by A. H. Ballard.*) Most domestic burners are designed for use with oil commonly known as gas oil, which has a gravity of something over 32 degrees Baumé, and any make of burner which has been designed so as to be wholly dependent upon this oil for success should be condemned. The market for this oil has in the past ten years been more or less fluctuating and future prices are liable to be uncertain, because gas oil can be refined into higher grade products worth more money than fuel oils.

An equipment burning the heaviest oil possible is best, for the heavier the oil the more B.t.u.'s there are per gallon, and the less liable it is to fluctuate in price. While there is a demand for gasoline, there always will be fuel oil. Whereas, with gas oil, as it has a considerable amount of available gasoline, whenever there is a higher market for gasoline (making it profitable to further refine this gas oil), the price rises automatically to a point where it would be uneconomical to use it as a fuel for house heating. On the other hand, the price of fuel oil cannot rise above a point where it becomes prohibitive for use in furnaces as it has no higher value, nor is there any other market where it could be used that would bring a better price than that of being used for fuel.

For the success of a domestic oil-burning equipment for the present, at least, the storage of oil should be thoroughly considered, and an oil burning installation should not be installed without an oil storage for at least three weeks' supply. In the future it might be that there will be deliveries of fuel oil from door to door in five-gallon lots, but, at the present time, scattered deliveries mean so much in the way of added cost that it is not an economical way of handling fuel.

Summary of Recommendations: 1. The system should burn an oil not lighter than 32 degrees Baumé.

2. The burner should be of the atomizing type.

3. No part of the equipment should be located inside the boiler, so that in case of emergency, such as stoppage of electricity, a temporary wood fire may be started.

4. All dampers should be sized so they cannot close more than 80 per cent of the area of the smoke pipe.

5. All equipment installed with an oil-burning system should be of the very best materials and workmanship, securely fastened, all parts in a convenient place, so constructed that it can be kept clean and frequently supervised.

6. The question of noise, both mechanical and combustion, should be considered in any type of an oil burner, because the system may be very quiet in one place, and in another the vibration may be heard throughout the house.

In conclusion, it requires about 156 gallons of oil to equal 1 ton of coal, when a given percentage of efficiency is used in both cases and where a fair standard of B.t.u's in both coal and oil are taken. However, the comparison generally shows much more in favor of oil, because furnaces for coal burning are so varied that coal is crudely burned in the majority of cases.

Manufacturers have stated that 100 gallons of oil equal 1 ton of coal. This is not true in the case of heat values. However, it is fair to assume that 135 gallons of oil will equal 1 ton of coal when reduced to practice in each domestic unit properly installed.

China Wood Oil (25a11). (*Department of Commerce, Bureau of Foreign and Domestic Commerce, Miscellaneous Series No. 125, by William M. Taylor. Pages 21. Size 6" x 9".*) *Synopsis.* America's dependence on the Chinese product. The tree and its culture in China. Chinese production and extraction. The native press and its operation. Collecting and marketing the oil. Transportation on the Yangtze River. Collection and distribution at Hankow. Other marketing and export centers. Market conditions. Price trends of China Wood Oil. Present-day aspects. Future prospects. Forecasts for the season 1923-24. Growth and extent of trade in China Wood Oil. Tung-oil developments in the United States. (a) Methods of cultivation. (b) Advantages of domestic production. Technical aspects.

Paving Brick (3f4). (*U. S. Department of Commerce. Simplified Practice Recommendations No. 1. Issued by the Bureau of Standards. Third revision, 1 May, 1924.*) In accordance with the unanimous action of the joint conference of representatives of manufacturers, distributors and users and further amended by the standing committee at its meeting, 28 March, 1924, the Department of Commerce, through the Bureau of Standards, recommends that recognized sizes and varieties of paving brick be reduced to the following list:

SIZES IN INCHES[1]

Width	*Depth*	*Length*	*Width*	*Depth*	*Length*
3	4	8½	3½	3	8½
3½	4	8½			

VARIETIES

(*Sizes in Inches*)

Plain wire-cut brick (vertical fiber lugless) as usuallly laid			*Wire-cut lug brick (Dunn)*		
Width	*Depth*	*Length*	*Width*	*Depth*	*Length*
4	3	8½	3½	3	8½
4	3½	8½	3½	4	8½

REPRESSED LUG BRICK

Width	*Depth*	*Length*
3½	4	8½

Principles of Dairy-Barn Ventilation (35l). (*United States Department of Agriculture, Bureau of Public Roads. Farmers Bulletin No. 1393, by M. A. R. Kelley. Sizes 6" x 9". Pages 22. Illustrated.*) This bulletin explains the general principles underlying the ventilation of barns and discusses the systems of barn ventilation in common use.

Contents: The need for ventilation. The purpose of a ventilation system. Why fresh air is required. Why barn temperature should be controlled. Damage to building and feed. Prevention of disease. Factors which affect barn

[1] Tolerance of one-eighth inch in width and depth and of one-half inch in length allowable.

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ventilation. Difference in temperature. Amount of moisture in the air. Effect of the wind. Construction of the barn. Need of different construction in different sections. Animals source of heat. Ventilation systems. King system. Rutherford system. Modified King system. Window ventilation. Crack system. Construction. Type of barn. Windows. Hay chutes. Ventilators. Outtakes. Intakes, Inlet openings. Operation.

Specifications for Steel and Wrought Iron Pipe (296). The American Engineering Standards Committee announces the approval, as Tentative American Standards, of A.S.T.M. Specifications for Welded and Seamless Steel Pipe and Welded Wrought Iron Pipe.

Waterproofing of Gypsum Blocks (10a3). (*Bureau of Standards. Technical News Bulletin, No.* 87.) Cylinders of neat gypsum and sanded gypsum treated with various waterproofing materials and exposed to the weather for from two to three years have been tested for loss or gain in weight and absorption. Cylinders of neat gypsum and those treated with barium hydroxide exposed to the weather for six months have been tested for the same properties together with compressive strength. Cylinders treated with barium hydroxide show considerably less erosion than those of neat gypsum. They appear much harder, have gained considerably in weight, and decreased in absorption, but the comparative strength has fallen off.

U. S. Government Master Specifications for the Construction of Built-up Roofing, Type 5 A C S (12b11). (*Circular of the Bureau of Standards, No.* 174. *Federal Specifications Board, Specification No.* 150.) This specification was officially adopted by the Federal Specifications Board on 1 June, 1924.

Type.—This roofing shall consist of five layers or piles of asphalt saturated rag felt cemented together and surfaced with slag, gravel, or similar surfacing material, as called for in the proposal for the work.

Flashings of the type required under the specification for the building shall be included and shall conform to the United States Government Master Specifications for Flashings No. 156 or No. 157.

Materials.—Roofing of type 5 A C S shall contain not less than the following quantities of materials per 100 square feet:

	Over Concrete *Pounds*	Over Gypsum *Pounds*
Asphalt primer (F. S. B. Spec. No. 87)....	7.5	15.0
Five layers asphalt-saturated rag felt (F. S. B. Spec. No. 86).....	76.	76.
Asphalt for mineral surfaced roofing (F. S. B. Spec. No. 84).....	170.	170.
Roofing gravel (F. S. B. Spec. No. 82)....	400.	400.
or		
Roofing slag (F. S. B. Spec. No. 82).....	300.	300.

Workmanship.—The asphalt shall not be heated above 400 degrees F., and shall be hot when the felts are laid.

The sheets of felt shall be laid so as to be free from wrinkles and buckles, and so that pronounced ridges are not formed at the laps.

When the roof surface is of gypsum, each sheet of felt shall be nailed at approximately 6 inches from its upper edge with nails driven through flat tinned disks.

The surfacing material shall always be dry when applied, and, in addition, shall be heated in cold weather.

Concrete and gypsum surfaces installed by other contractors, before being considered satisfactory for laying the roof covering, shall be smooth, firm, dry, and free from high spots, depressions, and all loose and foreign material. Precast slabs shall be firmly set and well pointed.

When the roof surface is of gypsum, apply a second coat of primer after the first coat has dried, using not less than 1 gallon per 100 square feet.

Application.—Roofing of type 5 A C S shall be laid by either the shingle or the two and three method. The shingle method is preferred and shall be used when no choice is specified.

(a) Shingle Method.—(1) Coat the roof surface uniformly with asphalt primer, using not less than 1 gallon per 100 square feet and allow to dry.

(2) Over this coating of asphalt lay five layers of 32-inch asphalt-saturated felt over the entire roof surface, lapping each sheet 26 inches over the preceding sheet. Lap the ends of the sheets not less than 6 inches. When 36-inch felt is used, lap the sheets 29 inches. Mop each of these five sheets the full width of the lap with hot asphalt, using not less than 20 pounds per 100 square feet in each mopping. Cut off these layers of felt at abutting vertical surfaces.

(3) Over the entire surface apply a uniform coating of asphalt, using not less than 60 pounds per 100 square feet.

(4) Into this asphalt, while hot, embed the surfacing material.

(b) Two and Three Method.—(1) Coat the roof surface uniformly with asphalt primer, using not less than 1 gallon per 100 square feet and allow to dry.

(2) Over this apply a uniform coating of hot asphalt, using not less than 30 pounds per 100 square feet.

(3) Over this coating of asphalt lay two layers of 32-inch asphalt-saturated felt over the entire roof surface, lapping each sheet 17 inches over the preceding sheet. Lap the ends of the sheets not less than 4 inches. When 36-inch felt is used, lap the sheets 19 inches. Mop the full width of each lap with hot asphalt, using not less than 20 pounds per 100 square feet in each mopping. Cut off these layers of felt as abutting vertical surfaces.

(4) Mop the entire surface of this felt with a uniform coating of hot asphalt, using not less than 20 pounds per 100 square feet.

(5) Over this coating of asphalt, lay three additional layers of 32-inch asphalt-saturated felt over the entire roof surface, lapping each sheet 22 inches over the preceding sheet. Lap the ends of the sheets not less than 6 inches. When 36-inch felt is used, lap the sheets 24½ inches. Mop each of these three sheets the full width of the lap with hot asphalt, using not less than 20 pounds per 100 square feet in each mopping. Cut off these layers of felt at abutting vertical surfaces.

(6) Over the entire surface apply a uniform coating of hot asphalt, using not less than 60 pounds per 100 square feet.

(7) Into this asphalt, while hot, embed the surfacing material.

Additional Information.—Roofing of type 5 A C S is adapted to concrete and poured gypsum surfaces with inclines not exceeding 3 inches to the foot, and shall not be used on inclines greater than this.

Roofing constructed in the manner specified above is durable and should not require repairs or renewals on account of the action of the elements for a period of 20 years. While the surface of this type of roofing will require some attention in about the same time as roofing of type 4 A C S, if the roofing is allowed to stand until complete failure, longer life can be expected from type 5 A C S than from type 4 A C S.

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