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New Light on Greek Art¹

THE ONLY ancient work on architecture which has survived to our time was by Vitruvius, an obscure architect and mediocre writer of the first Century A.D.

His avowed object in writing was to correct, what he conceived to be, the faults of Greek architecture by formulas evidently of his own making.

Mixed in with much that is either idle or false, his book contains a few passages of great value concerning certain Greek methods of design in common use when he wrote. From these we learn that it was the custom of the Greeks to use modules to obtain harmony of proportion in buildings.

In all living creatures the parts are proportional. Seeing this principle exemplified everywhere in nature it was natural that man should have attempted to use it in his own work. It is not practicable to make all corresponding parts of different buildings proportional, but in the same building all parts may be proportional and many may be invariable in their design as we see them in Greek Doric buildings. These invariable parts, or some of them at least, were the key to the work; placed on the structure just as the musician places the signature on the written sheet of music.

Notwithstanding the fact that the formulas of Vitruvius do not agree with the ancient work, his unsupported word has generally been accepted as true during the last 500 years; so that today, in every civilized country, in every school of architecture, the teaching is based on his statements which can now be proved false. This has been disastrous for art. In large measure architecture has been degraded from the status of a fine art to the mere exercise of mathematical formulas. The outward forms of Greek architecture have been simulated, but the principles which produced those forms have not been used nor understood.

¹ A paper read at the Institute of France at the session of the Academy of Fine Arts, 28 June, 1924.

When a student at l'Ecole des Beaux Arts in Paris, in working on a project, to save time and trouble, I first drew in all the axial lines of the plan. They formed squares so nearly equal that I decided to make them so and observe the result. To my satisfaction the design seemed improved and the thought presented itself that perhaps in this way harmony of proportion might be obtained with certainty for which, otherwise, I should be blindly groping. Further experiments seemed to confirm the correctness of this theory and also revealed other unexpected benefits of importance. So convinced did I become of the advantages of the method that I determined to use it in actual practice and during 35 years, in work large and small, I have done so with satisfaction and profit.

When one uses a system of this sort the mark of the module appears on the work. As the fixed unit pervades every part of the design it is only natural to use it for the spacing of features of repetition, such as consoles, triglyphs, and so forth.

A few years ago, when examining a restoration of certain Greek temples, the thought flashed on me that the triglyphs might be the mark of the module, placed there for the same reason which had so long prompted me to mark the module on my own work. Upon investigation strong evidence was found of the correctness of this supposition. In many temples the outer faces of the lateral walls of the *cella* coincide with lines drawn through the plan from center to center of opposite triglyphs. These same walls often stop on such a line or else with pilasters centered on one. In some buildings I found a constant ratio between width of bay and height of columns and similar points of likeness in other groups. I also noticed that practices which I had found most convenient in the use of the module were the very ones employed by the Greeks.

From my point of view the truth was clear, but

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others did not see it as I did. Being sure of my ground I determined to find and present absolute proof, but how to begin?

To prove the unit it would be necessary to prove intended dimensions; to do so there must be something definite to work from, and how was that to be found where all was uncertainty and disagreement? Practically none of the findings of the principal investigators agree at a single point; many dimensions much to be desired are missing, and measurements of my own would be suspected of having been influenced by the theory. For a long time the task seemed hopeless, but finally progress began to be made.

In studying the temple of Diana Propylæa at Eleusis, I discovered that, according to Hittorff's measurements, the height of the top step is contained exactly 25 times in the height of the column and stylobate. It was also evident that other important dimensions were intended to agree with multiples of the unit. Similar conditions were found elsewhere. Even the temple of Rome and Augustus at Pola, a Roman building of much later date and different order, conforms to the rule, and fifty times the height of the top step exactly equals the height of the stylobate and order. Here a strange condition was found. The building is composed of a *pronaos* and *cella*, together forming one façade on the flanks, yet each of these two parts has its own governing unit. The unit of the *pronaos* is represented by the top step and that of the *cella* by a continuation of the step in the form of a plinth, but slightly higher or thicker than the step. By ingenious adjustments, clearly apparent, the two units are made to work together and the various divisions of height agree with multiples of their proper units. In the Parthenon the intended height of the order exactly equals 25 times the step unit. There is not time to multiply examples. I can only say that similar conditions are found in every one of the several ancient buildings I have had an opportunity to study since making the discovery.¹ In this way it was possible to be sure of various intended dimensions. Certainty was also secured in other ways.

The stylobate top of the Parthenon was intended to be in the proportion of 4 of breadth to 9 of length. This is certain both because all measurements closely approximate that ratio and because it is found in stylobates of other temples. But what were the exact dimensions? The investigators all differ in their findings. Neither do any two agree as to the width of the bays from axis to axis of columns. Penrose gives 169".056 and Collignon 168".898.

Having observed that multiples of 13 abound throughout the work, it seemed possible that the building might be designed in that key. A test of this produced the most astonishing results. It was found that

¹ I have since learned that this is common but not invariable.—
E. F.

the square of 13 was exactly contained in every dimension of height which had been made certain in the way before described, and similar keys were found in other buildings.

Now it was seen that the intended width of the bay was 13^2 itself or 169", which lies between Penrose's and Collignon's measurements. Being sure of the bay, it was easy to make sure of the dimensions of the stylobate top, because it must contain 16 times the bay one way by 7 the other way with equal margins to the edge of the step. It was immediately seen from the measurements that the margins were intended to equal the height of the capital, or what may be called the capital unit, which is two times the square of $13 = 33".8$, and that the intended length of the stylobate top was 2737".8 and its intended breadth 1216".8, figures which agree closely with the measurements.

It was also found that the capital unit would be exactly contained in the length and breadth of the peristyle platform, in the height of the order and in the width of the bay. The intended width of the bay when multiplied by the number of bays at end and side gives two quantities which of course stand to each other in the proportion of 7 to 16, corresponding to the number of end and side bays. If to each of these quantities the intended height of the capital be added, two other quantities are produced which are to each other as 4 to 9 corresponding to the width and length of the stylobate platform.

The height of the triglyph, including base, when added to the height of the cornice exactly equals half the width of the bay, a condition found in some other temples.

The intended height of the triglyph is contained exactly 10 times in the height of the building, from the pavement to the top of the cornice; 20 times in the width of the stylobate platform and 45 times in its length; 10 times the height of the triglyph capital exactly equals the height of the stylobate.

The height of the top step is to the height of the capital of the column as 16 is to 25, and the height of the capital is to the height of the triglyph as 10 to 18.

The sinkage at the joint, between capital and shaft, represents the hundredth part of the height of the capital and this same small unit appears to be contained in all minor and major divisions of the façade. The whole height of the building equals 2,600 of them.

The units prove that the small base below the steps was a part of the building intended to be seen. The base showed that the steps were not for mortal use but figurative; it also gave scale to the structure which otherwise it would lack.

Many pages might be filled with interesting facts of this sort, but enough has been said to show how certainty was reached as to many intended dimensions.

NEW LIGHT ON GREEK ART

The work of investigation is of the most absorbing interest in which days pass as hours and weeks as days. Each new discovery makes the way easier and one becomes enraptured with delight and enthusiasm as these ancient fabrics slowly, and as if reluctantly, yield up their long-guarded secrets and the true principles of Greek art are disclosed.

The work, as far as I have been able to carry it, has been tabulated. The measurements are not mine. All that I have done is to discover a number of the units and the meaning of several of the parts. My figures may easily be verified and one who does so can hardly fail to be astonished at the close agreement of the work with the governing units. It conforms indeed with an accuracy which would be unbelievable without proof.

The question now presents itself, what was the meaning of this marvelous accuracy? Such work was not done without an object.

There can be no doubt that the eye of the ancient architect was trained to harmony of dimensions just as the ear of the modern musician is trained to harmony of sounds. The numerous slight refinements to correct optical illusions show conclusively that this was so, for they would not have been made if the need for them had not been felt.

Everywhere in Greek work one finds simple proportions, i.e., proportions based on the lower digits as 1 to 1, 1 to 2, 2 to 3, and so forth. There are only ten of these combinations between 5 on one side and 5 on the other and only 26 between 5 on one side and 10 on the other. It is quite conceivable that the eye could be trained to observe such ratios, after correction had been made for optical illusions, as found in the Parthenon. Even with us almost any architect of experience can tell with considerable certainty the number of diameters in the height of a column.

There is close analogy between architecture as a fine art and music; one relates to harmony of dimension and the other to harmony of sound. As each musical composition is written in a certain key, so each ancient building appears to have been designed in a certain key. The key of the Parthenon peristyle was 13 and every intended dimension, large or small, so far as I have been able to discover, is a multiple of 13. The width of the bay is 13^2 ; the height of the capitals is 2×13^2 ; the length of the triglyph is $6^2 \times 13^2$, the overall length of the base is $13^2 \times 13^2$ and the overall width 79×13^2 , and so it is with all other intended dimensions.¹

¹ Since this document was prepared the writer has continued his researches in connection with the Parthenon and other temples and learned much that he did not know when he wrote it, one result being that he is not as sure as he was that 169 English inches exactly represents the intended width of the bay, upon which depends the fundamental unit. The reasons for this doubt have to do with the Greek foot and can hardly be explained in a note. That will be done in a book now in preparation. The ratios here given are evidently right, even though there may be an almost infinitesimal error in the unit, but the key number would not be 13.2.—E. F.

Since the destruction of the ancient learning, architecture has not been a fine art in the Greek sense, but at most the imitation of one. For 2,000 years it has been in the condition in which music or poetry might have been if ages ago all knowledge of harmony and measure had been lost and not recovered. During five centuries we have been copying the outward forms produced in the practice of the ancient fine art architecture. Is it not possible for us now to practice the art itself and so create new forms more beautiful perhaps than those of the Greeks? We are of the same stuff as they, but they possessed certain simple principles, since lost, which produced great art. From their work we may recover a knowledge of those principles and apply them to our own benefit.

Vitruvius gives us two doctrines, one of Grecian origin and the other apparently of his own invention. These investigations prove the one true and the other false. His own doctrine relates to the use of the lower diameter of the column as the module and his various formulas for the design of the order. The Greek doctrine he states in effect as follows:

To be well designed a structure should have harmony as we see it in the human form, where there exists a symmetrical relationship of proportion between the members and the whole. That harmony may be had by the use of modules taken from the work itself to serve as terms of comparison for the various parts and the whole structure.

Since the Renaissance architecture has followed the false doctrine of Vitruvius and the true doctrine of the Greeks remained a dead letter.

The art of the Greeks was simple. It had for its object the extraction of the essence of beauty in nature. It was conventional. It did not simply copy nature, for that is useless. We see natural objects all about us in better form than they can be copied. Naturalism is vulgar. Art should go below the surface and reveal the spirit.

In man himself, and indeed in every living creature, from the largest animal to the smallest insect, we see exemplified the correct principles of design. Nature is lavish in her instruction. In each living production may be found harmony of proportion, unity, scale, symmetry and all other essential qualities of correct design. So that to tabulate them one has but to record what there stands revealed. The object in the use of the principles of design should be the production and preservation of beauty. If that is not the result then they have been either misunderstood or wrongly applied. There may be art in the making of things unpleasant to see like many modern pictures, statues, and buildings, but of what use is it? There is enough ugliness in the world without taking pains to produce more. In architecture nine points of beauty depend on proportion, and good proportion may be had with

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certainly by the use of modules. In that way one may design always using those simple combinations of dimensions which are sure to please.

In recent times in all civilized countries there has appeared a restless tendency to break away from former methods, to abandon the meaningless copying of ancient forms and to walk independently. Such a change would be most commendable if made without sacrifice of beauty and refinement. Heretofore even the semblance of the ancient art has sufficed to stamp many of our productions with a certain *cachet* of elegance albeit but the outer shell or husk of the true art. Now, even that is passing. Beauty and refinement seem no longer the fashion.

With us in America much recent work has not even common sense to recommend it. The desire to hide or camouflage the steel frame has resulted in a veritable epidemic of falsification. Many of our constructions are simply architectural scenery—falsehoods in which neither the construction nor the design are what they pretend to be.

Here in France much of the new work appears more German or Bolshevik than French. The exquisite taste, which for so many centuries has characterized French productions and made of Paris the art center of the world, appears to be under a cloud. In many

new buildings one sees in the ornamentation a strong leaning towards realism, much of it being simply the naturalistic reproduction of foliage—photographic and meaningless. On the other hand, in paintings there is often a grotesque departure from nature, while in both, beauty—the *raison d'être of art*—is missing. The taste of the world must indeed be at the ebb when such things are found here.

"If the salt hath lost its savor, wherewith shall it be salted?"

My hope is that these and further disclosures of Greek methods may awaken a new interest in classic art, and that this time it will not be the outward form which is copied, but those simple yet profound principles which enabled the ancients to carry taste to the highest point it has reached on earth.

Thus far little has been done, but that little may prove of great value. The documents which I have prepared prove conclusively the truth of the Greek doctrine transmitted to us by Vitruvius, and show, in some measure at least, how it was applied.

The door is now ajar and may be pushed wide open admitting us to full knowledge of those methods of design which have proved most worthy of the genius of man.

ERNEST FLAGG.

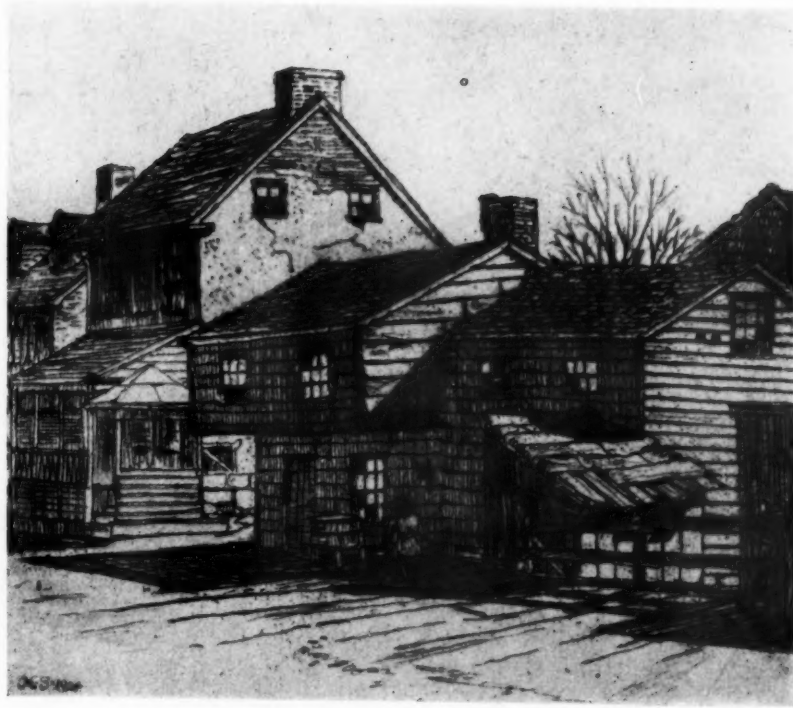


Some Old Maryland Houses
After the etchings by HOWARD SILL

PLEASANT AND ST. PAUL STREETS—BALTIMORE, MARYLAND



"FRIENDSHIP"—PRINCE GEORGES COUNTY, MARYLAND
Built circa 1730
Howard Sill



FLEET STREET—ELLICOTT CITY, MARYLAND
Howard Sill



THE IMPERIAL INSTITUTE, SOUTH KENSINGTON
THE LATE T. E. COLLICUTT, PP. R.I.B.A., Architect

From "The Architects' Journal"

From Foreign Shores

Whistling Up a Wind

THE OFFERINGS which have come recently to my docks contain just about as little of architectural interest as is possible, and so much less than the previous cargo as to be noticeable. The illustrations generally are of uninspired subjects when they portray new material, and not away from the commonplace when they reproduce the old. The letterpress generally seems not to be very far in advance of the illustrations. I look for good reading in *Architecture*, the Journal of the Society of Architects, London, but no copy has come to hand in the present consignment. In fact a number of my old friends are missing. But just because of that, that is, because of a seeming paucity of material, I am not going to single out some one individual and make him, rather than the ideas he advances, the object of my lucubrations. I shall not steer that abominably easy course even to prove a statement which I recently made in print—that after all it is the man that counts rather than the thing; that the thing counts only as it proclaims the man. Had there been no name signed to a recent article, or, let us say, "reaction" of mine, my critics, at least one of them, would have had nothing to say; or at least could have said nothing. You remember *Fanny's First Play*? Not one of the critics

called in to witness the dress rehearsal and to pass judgment on the play could utter a word until he had first ascertained the name of the author! How can one criticise a play until he knows who wrote it? they asked. What starting point has one without that knowledge! I wonder whether architectural critics in this country are like Fanny's dramatic critics.

Personalities in Criticism

Whether our own dramatic critics can criticise a play without knowing the name of the author, certain it is that the bulk of them cannot write a notice of a play without using the names of the actors and actresses, especially the latter. How our dramatic critic loves to roll the name of a young or pretty actress under his tongue. There are underlying principles in the arts of painting and music and architecture which the critic is supposed to know and if these principles are violated, he knows and comments thereon; as he knows and makes comment when conditions of artistic structure have been fulfilled. (At least let us say that it is so in architecture for the good name of our profession and of our critics.) But evidently there are no standards of dramatic construction; and all the critic can do is to relate the plot of the play; and because neither plot nor characters mean



THE STADIUM, WEMBLEY
SIR JOHN W. SIMPSON AND MAXWELL AYRTON, Architects

From "The Journal of the R. I. B. A."

anything to him abstractly (or passes are not given to him for dealing in abstractions) he uses the names of the performers. Thus, in reporting "Hamlet" with an all-star cast: "Edwin Booth stabs Lawrence Barrett in a duel"—or it is the other way about?—"because Mary Anderson went nutty and drowned herself." I saw this statement made point blank in a dramatic column not so long ago: "_____ is the illegitimate daughter of _____"; the names being those of a well known actor of society parts and of a popular actress of about his age. Of course it was in the description of a play—but doesn't that make it worse rather than better? Thank goodness, architectural criticism, even when it is personal, isn't as low as that. In connection with all this, I cannot help but wonder whatever was in the head—I almost said *mind*—of one of my recent critics when, in arguing for precedent and bemoaning the blight which non-users of precedent had placed on architecture, he said: "We had Richardson and Sullivan—we still have Pond and Frank Lloyd Wright" (for which you may thank God). But—Sullivan and Frank Lloyd Wright, preëminent among our innovating individualists, classed with Richardson, a man of power whose every form was based on narrow precedent, and with Pond who in all his life never dared nor cared to stray away ten feet from the spirit of the finest precedent of all ages! That's logic.

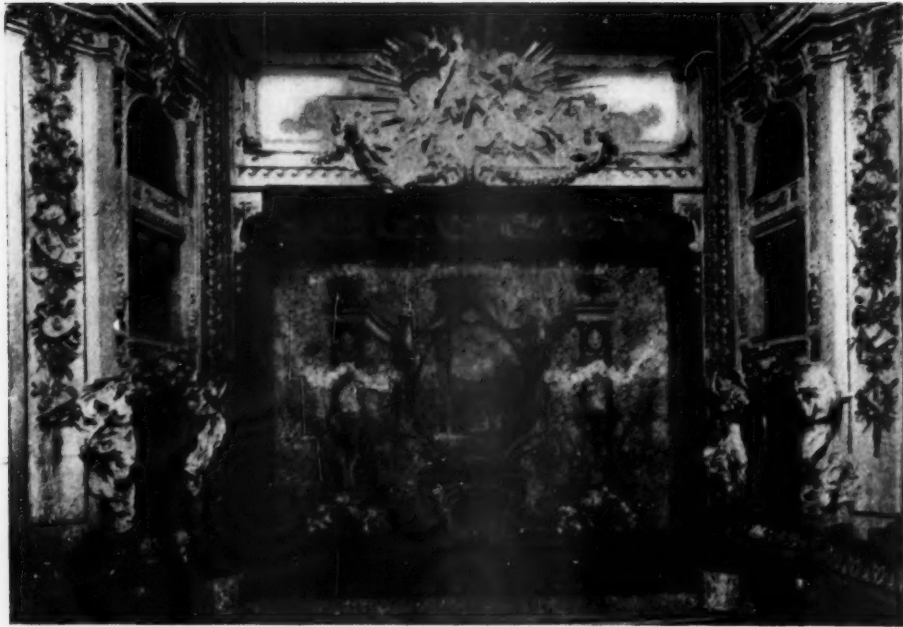
Legitimate Criticism

All the foregoing was started by an editorial with the selfsame caption in *The Architect*, London, 24 October, dealing with an anonymous review (the writer of which the editor undoubtedly recognized behind the mask) of a book on *Regional Architecture of the West of England*, by Professor Richardson. The review in ques-

tion appeared, it seems, in *The Times* and in a British architectural journal, and is quoted in full in *The Architect* in order that its enormity may be fully apprehended and the merited rebuke appreciated. The reviewer says: "We would enter a plea for architectural books of popular interest being written in sensible English. It is no use the authors of such urging that the meaning of expression in building be taught to 'the people,' when they themselves are open to the retort that the meaning of expression in words should be learned by the authors. We know what an architect would say of a serious architectural work being a medley of all styles, but what will most readers say of this?"

Then something seems to be omitted, and the review goes on to quote, evidently, from the book; but by the manner of handling one could not say whether the words were the author's or the reviewer's except that they seemed to be too sensible for a reviewer's: "For nearly a hundred years vernacular building expression, which makes up the bulk of national architecture, especially in the country, has been suffering a partial eclipse; experiments have been made, it is true, by architects to transplant shoots taken direct from old roots, but the ground has not been sufficiently prepared, the truth being that a vernacular growth, if it is to be healthy and vigorous in its flowering, needs the care of humble gardeners. Owing to the want of craftsmen, of bricklayers, masons, carpenters, and others skilled in their craft, men enamoured of their trade for the work's sake, architecture, the first and fairest of the Arts, has become a painted beauty, an odalisque to be bought and sold in the slave-market at the will of the purse-proud."

These are Professor Richardson's words, and, as an architect, whatever may be my limitations as a reviewer,



THÉÂTRE DE LILLE—THE CURTAIN
L.-M. CORDONNIER, Architect

From "L'Architecture"

or however supercilious my critical attitude ought to be, I find that the sentiment strikes a sympathetic chord in me. Evidently the editor of *The Architect* is similarly impressed, for, in answering the reviewer he says: "Does the writer deny that in the last century there has been practically no vernacular expression, *i.e.*, that traditional craftsmanship which differentiated buildings in one locality from another is wholly or almost wholly extinct? A door made in Devonshire and one in Yorkshire would, unless made to an architect's details, be finished with similar stock mouldings."

"It was not so," the editor continues, "in the past when there were no stock mouldings, and when a great part of the details and design were relegated to the craftsman, and the author states this in terms that to us seem absolutely clear. Again, is it not entirely true that modern design, if it is design at all, is the outcome of the architect's work? And is it not true that if our architectural expression is simply the outcome of the architect's direct instructions and details, it cannot be said to form a vernacular expression, but is only evidence of the superimposed will of a limited number of designers?"



MUNICIPAL DEVELOPMENT AT ELBERFELD
PROF. KARL WACH, B.D.A., Architect

From "Deutsche Bauhütte"

FROM FOREIGN SHORES



From "Construction"

ST. GEORGE'S ANGLICAN CHURCH, OSHAWA, ONTARIO
EDEN SMITH & SON, Architects

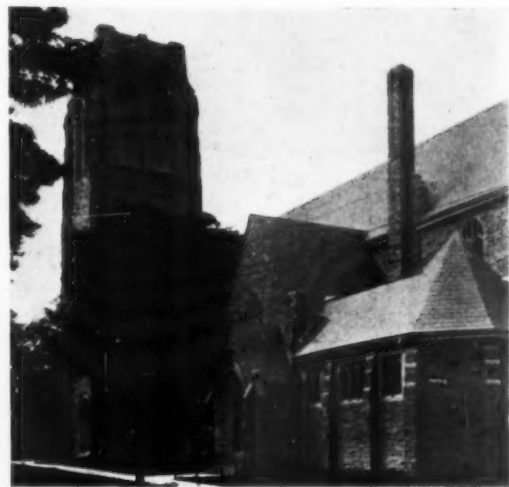
Professor Richardson's concluding lines that architecture is 'bought and sold' at the will of those who employ architects is literally true, whether the architect is a man of reputation or not."

I found the editor's criticism of the review very interesting and I believe his strictures on the reviewer of Professor Richardson's book were well deserved. The discussion brings out one point of peculiar interest to those of us in this country who wish to see architecture develop locally as befits the geography of the region, and the peculiar conditions of temperature and of atmosphere. However, we, to use the vernacular, are up against the "hand-me-down" spirit of the age; up against stock mouldings, stock doors, stock building materials and methods and—worse than all—stock methods of education from the primary grades up and through our architectural training. All are educated under one system which takes no account of the individual or of individual capacity or predilections; which, professing to elucidate principles, really drills stock forms so deeply into the inner consciousness that the evil, for evil it is, never can be eradicated. (I wish education would not obtrude its ugly little nose into my line of vision when I am trying to think of something interesting and pleasant to write about; but it is a persistent ghost and will not down, at least not for long.)

Back to First Principles

It has long been a hobby of mine that architecture is not going to become very interesting to sincere minds until we get back to first principles, back to the elemental.

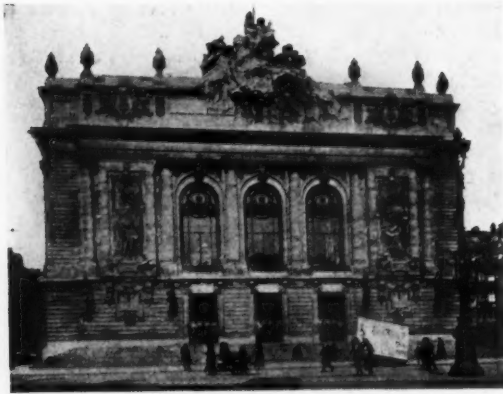
By "we" I mean both those for whom architecture is called into existence and those who are responsible for the form it takes. An article on "Provençal architecture," in the same number of *The Architect* which contains the editorial already cited, is responsible for the introduction of the subject at this juncture. The simplicity and charm of the old stuff in comparison with the bizarre and tortured villas of the Riviera appeal to the author of the article as they must to any soul sensitive to the eternal fitness of things. Return to the elemental does not imply return to crudity or baldness; it implies an appreciation of the value of fine proportions; of relations of mass to mass; of the virtue residing in careful choice, restrained use, and appropriate placing, of detail. Proportions and correct relationships are hidden virtues, concealed in our over-developed architectural productions under a thick skim coat of temporarily fashionable ornament—one designer vying with the others in matter of over-elaboration. Proportions and correct relationship are hidden virtues, also, to many who are employing simple forms through laziness or lack of imagination. Charm and grace must inhere in architecture worthy of the name. In the mastery of these elements the modernist is apt to fail. Because one can do strange and freakish and strained things with modern structural materials is no sign he should. It is this straining for effect that is making so much of the continental architecture hideous. It isn't hideous because it is new, because it is modern, but because it is lacking in elemental sanity. The modern brick buildings of Holland, for instance, are so unsatisfying, so inartistic, because they could not be constructed in brick but can be achieved only by the application of a brick skin to a ferro-concrete skeleton; though they really are no more inartistic to a sensitive nature than are the English and American buildings created by the application of classic columns and entablatures or Gothic piers and arches to steel or to reinforced concrete structures. It



From "Construction"

ST. GEORGE'S ANGLICAN CHURCH, OSHAWA, ONTARIO
EDEN SMITH & SON, Architects

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THÉÂTRE DE LILLE
L.-M. CORDONNIER, Architect
From "L'Architecture"

is not that the forms are ancient or modern, old or new, that makes them ugly or inappropriate; it is their misapplication and misuse.

The Passing of Collcutt

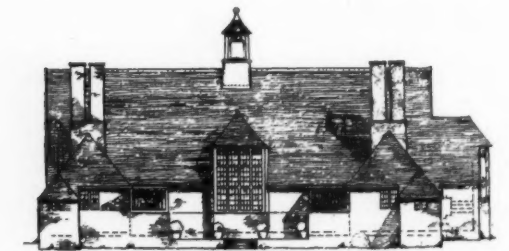
The English architectural journals carry notices of the death of Thomas E. Collcutt, Past-President and Royal Gold Medalist of the R. I. B. A.; and illustrations of

his work are given. Collcutt had a fine and genial personality and from what I saw of him in the Fall of 1911 I can well understand the feeling of personal loss which his death has brought to many within and outside of the profession. The Imperial Institute which we illustrate from *The Architects' Journal*, 22 October, 1924, is regarded as his chief work. I do not like to think of the number of kindly faces I should miss were I to attend another gathering of the R. I. B. A. While I was President of the American Institute of Architects, on my way homeward from the International Congress of Architects in Rome and Venice in 1911, I stopped in London and was entertained by the Council at its annual dinner, which precedes the opening session whereat the newly-elected president of the Institute is inaugurated. At that dinner I broke, perforce, though not wilfully, a tradition, and possibly, though improbably, established a precedent. I made a speech! It was in response to a toast to the American Institute of Architects, offered by the then President, Leonard Stokes, who was in the chair. That was the first time, it was said, that a speech had been made at one of those dinners, or any toast drunk other than the one to the reigning Sovereign. I cut that speech short, but made up for it later in the evening when I seconded the resolution for a vote of thanks to the incoming President of the Institute for his inaugural address. They do things in a seemly manner over there, and I really felt at that Council dinner that precedents were better followed.

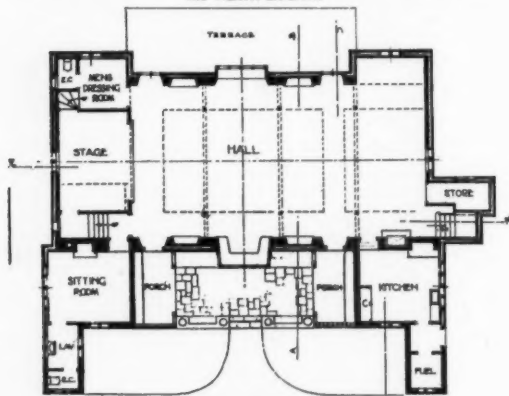
The Illustrations and Such

Construction, Toronto, Canada, 24 October, illustrates quite fully Eden Smith's Anglican church at Oshawa, Ontario. Two details of the exterior attract attention; I hate to say—mar the composition. The top of the tower seems incomplete; it looks like a case of arrested development, though the feature had been entirely proper had any similar forms led up to it. The chimney must have been an after-thought; it hardly could have been contemplated in the original design. Baillie Scott and Beresford show a cute little Women's Institute in *The Architect* for 10 October. We reproduce from the *Journal of the R. I. B. A.*, 18 October, an illustration of the Stadium at Wembley, by Sir John W. Simpson and Maxwell Ayrton. This is from a well illustrated article on the buildings of the British Empire Exhibition. An interesting municipal development at Elberfeld is shown in *Deutsche Bauhütte* for 24 September. I have reproduced these plates, for the designs have a real punch. In contrast to the offering from *L'Architecture* in my preceding cargo, we present the Theatre at Lille which was finished at about the outbreak of the war, taken over by the Germans, and allowed to stand. Externally and internally it may serve as a model for our over-chaste Movie Houses. When the French really care to slather on the ornament we Anglo-Saxons might as well stand out of the way. These types of theatres are best seen when the lights are extinguished and a midnight storm in all its gloomy frightfulness is drenching the silver screen. There is more I might present for the edification of the reader, but time is come to stow sail and beach my craft.

IRVING K. POND.



The NORTH Elevation.



The GROUND FLOOR Plan

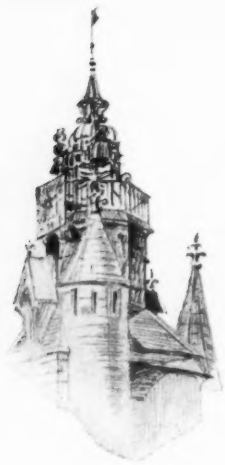
From "The Architect"

WOMEN'S INSTITUTE AT MILFORD, SURREY
BAILLIE SCOTT & BERESFORD, Architects



Gables, Dormers and Chimneys in Old Dijon

After the sketches by GREVILLE RICKARD



GABLES, DORMERS AND CHIMNEYS IN OLD DIJON
Greville Rickard



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The Bertram Grosvenor Goodhue Memorial Volume

FROM THE admirers of Mr. Goodhue's work, from the readers of the JOURNAL, from places far on the other side of the world, from people in many and various walks of life, there comes a steady stream of inquiry as to when the Goodhue Memorial Volume will be ready. We can but answer that it will be as soon as possible, and that we hope to issue it early in 1925. The task of assembling the material has involved much correspondence, the searching out of clues that seemed to promise the discovery of fresh material, and many preliminary considerations of the scope and character of the work. The interest that has everywhere been shown and the willingness that has without exception been offered are eloquent evidence of the affection and esteem in which not only the work of the architect, but the man himself were held.

On the opposite page we reproduce one of the interesting drawings that has come to light in our search for the fugitive material that was known to exist in some considerable quantity. "In Xanadu" was drawn on a page of the guest book of Mr. Elmer Grey of Los Angeles, and he has generously and thoughtfully sent us a photograph and his permission for reproduction in the book. It is this side of the life of Goodhue that we desire greatly to emphasize—the story of that incessantly busy pencil, urged on by that ever dreaming brain, full of fantasy and beauty, teeming with the genius that was transcendent throughout his whole life. May we here ask any readers of this page who possess any of Mr. Goodhue's drawings to let us know of them? It will of course be impossible to include, in the present work, all the material available, but it is our wish to make the volume as complete a record as can be, while keeping the work within the size and price which will make it available to all.

We have received numerous inquiries as to whether or no the current reprint of the book of Mr. Goodhue's

drawings issued some years ago is the same as the Memorial Volume we have already announced. The answer is that it is not, and it is perhaps worth while to say that the (present) reprint of the old book was protested by Mr. Goodhue before he died, who even went to the extent of seeking to discover whether there were legal means to prevent it.

The manuscripts for the Memorial Volume are now in hand. They are by Mr. Cram, who deals with the period when Mr. Goodhue entered the office of Cram & Wentworth up to the severance of the partnership of Cram, Goodhue & Wentworth; by Mr. Lee Lawrie, who writes of his experiences as collaborating sculptor; by Dr. Alexander of Lincoln, Nebraska, who gives an account of the new capitol; by Dr. George Hale of California, who recounts the history of the last building by Mr. Goodhue that had come to be nearly finished before his death. The period covered in those years between his entrance into the world at Pomfret, and his association with Cram & Wentworth will be the subject of a biographical memoir to be written by the editor of the JOURNAL.

To show the scale of the work illustrated in the volume, new drawings are being made.

May we therefore again renew our plea that any readers having sketches or correspondence of Mr. Goodhue be good enough to acquaint us at once with the nature of these so that in so far as possible nothing of interest or moment may be overlooked or forgotten or left in obscurity.

* * * * *

At the Century Club in New York City, there was opened on 8 December an exhibition of the drawings, sketches, typographical designs and letter work of Mr. Goodhue. Unfortunately the period of the showing was limited to a fortnight.



"IN XANADU"
After the drawing by Bertram Grosvenor Goodhue
Courtesy of Elmer Grey



Photograph by Jeannette Kilham

AN OLD FRENCH TAPESTRY

From the offices of Messrs. Kilham, Hopkins & Greeley, of Boston, comes the photograph of this rare and priceless work. From its color, we are informed, it is adjudged 17th or early 18th century French and the border motto is taken verbatim from the King James version of the Bible. It is hoped that through its publication some reader of the JOURNAL may be able to offer some information about it. Another and regrettable reason is that the original was stolen from an exhibition early last December, and that it may possibly be traced and returned to Messrs. Kilham, Hopkins & Greeley, its rightful owners.

The New Risorgimento

THE DAILY press recently illustrated an edifice to be erected in Rome and known as the "Mole Littoria." It is a most extraordinary building. The drawing, a very good one, is a rendered elevation and shows a structure covering a very considerable area, eighty-eight stories high, designed by Mario Palanti. Its silhouette is massive and picturesque, though formally balanced. The lower stories, instead of being largely composed of plate glass, with a minimum of masonry—as is customary in most of the towering structures in our metropolis—contain a very large area of wall in proportion to the openings. Great arches spring from ponderous piers crowned by a frieze of balconies and hanging gardens enriched with sculpture. The balconies in form resembling barbettes on armored cruisers appear at intervals on the façade, and form a chaplet at the seventy-ninth floor. The "Fachhada Principale" extends for at least a thousand feet. At either end there are enormous half domes, ninety feet in radius, their tops rising two hundred feet in the air. These gibbosities, which do not seem fully in rhythm with a design otherwise consistent, form abutments to the main building, which is about four hundred feet high and six hundred feet wide. This latter portion is similar in fenestration and composition to our newer office buildings, with the breaks and setback restrictions imposed by zoning laws. The central tower, about one hundred feet square, soars upward for eleven hundred feet; and its form is a delicate compliment to that distinguished architect, Mr. Ernest Flagg. The whole forms an harmonious combination of the Colosseum, the Baths of Diocletian, the Hudson Terminal, and the Singer Building. There is an impressive power and strength in its lines.

The Littoria will contain 4,500 rooms, 100 halls, a huge theatre, a concert hall, gymnasium for all kinds of sports (except fox hunting), swimming pool, libraries, and so forth. Built of reinforced concrete, it is designed to be a centre for all sport associations, and to prepare scientifically all champions for international and local contests.

The significance of such a project is profound. The great strides that Italy has made in the last few years presages the new Renaissance. With her glorious background, there are no heights she may not attain. All art is vibrant, seething, pullulating. The majesty of great masterpieces is resonant with dynamic force. There is an overpowering harmony in the grandeur of Karnac, Thebes, Gizeh, Pæstum, Athens, Ephesus, Rome, Florence, Venice, Chartres, Toledo, Ely. Their divine diapasons stir the soul. They dance in the sunlight like Sophocles at Salamis, they stir the heartstrings like a symphony in the moonlight.

Taine has shown us the close relationship between æsthetic beauty and physical development. The popularity of sports is the most encouraging sign for the future of art. A passage taken from *The Philosophy of Art* may be quoted in this connection.

"If ever the correspondence of art with life disclosed itself through visible traits, it is in the history of Greek statuary. To produce man in marble or bronze, the

Greek first formed the living man, perfect sculpture with them being developed at the same moment as the institution through which was produced the perfect body. One accompanies the other, like the Dioscuri, and, through a fortunate conjunction, the doubtful dawn of distant history is at once lit up by their two growing rays.

"The two appear together in the first half of the seventh century (B.C.). At this epoch occur the great technical discoveries of art. About 689, Butades of Sicyon undertakes to model and bake figures of clay, which leads him to decorate the tops of roofs with masks. At the same time Rhoikos and Theodoros of Samos discover the process of casting bronze in a mould. Toward 650, Malas of Chios executes the first statues in marble, and, in successive olympiads, during the latter part of that century, and the whole of the following century, we see statuary blocked out to become finished and perfect after the glorious Median wars. This is the period at which orchestral and gymnastic institutions become regular and fully developed. A social cycle terminates, that of Homer and the epos, while another begins, that of Archilochus Callinus, Terpander and Olympus and of lyric poesy."

In speaking of the Spartans, Taine says:

"As soon as the infant begins to walk they not only harden and train it, but again they methodically render it supple and powerful; Xenophon says that they alone, among the Greeks, exercised equally all parts of the body, the neck, the arms, the shoulders, the legs, and, not merely in youth, but throughout life and every day, and in camp twice a day. The effect of this discipline is soon apparent. 'The Spartans,' says Xenophon, 'are the healthiest of all the Greeks, and among them are found the finest men and the handsomest women in Greece. . . .'

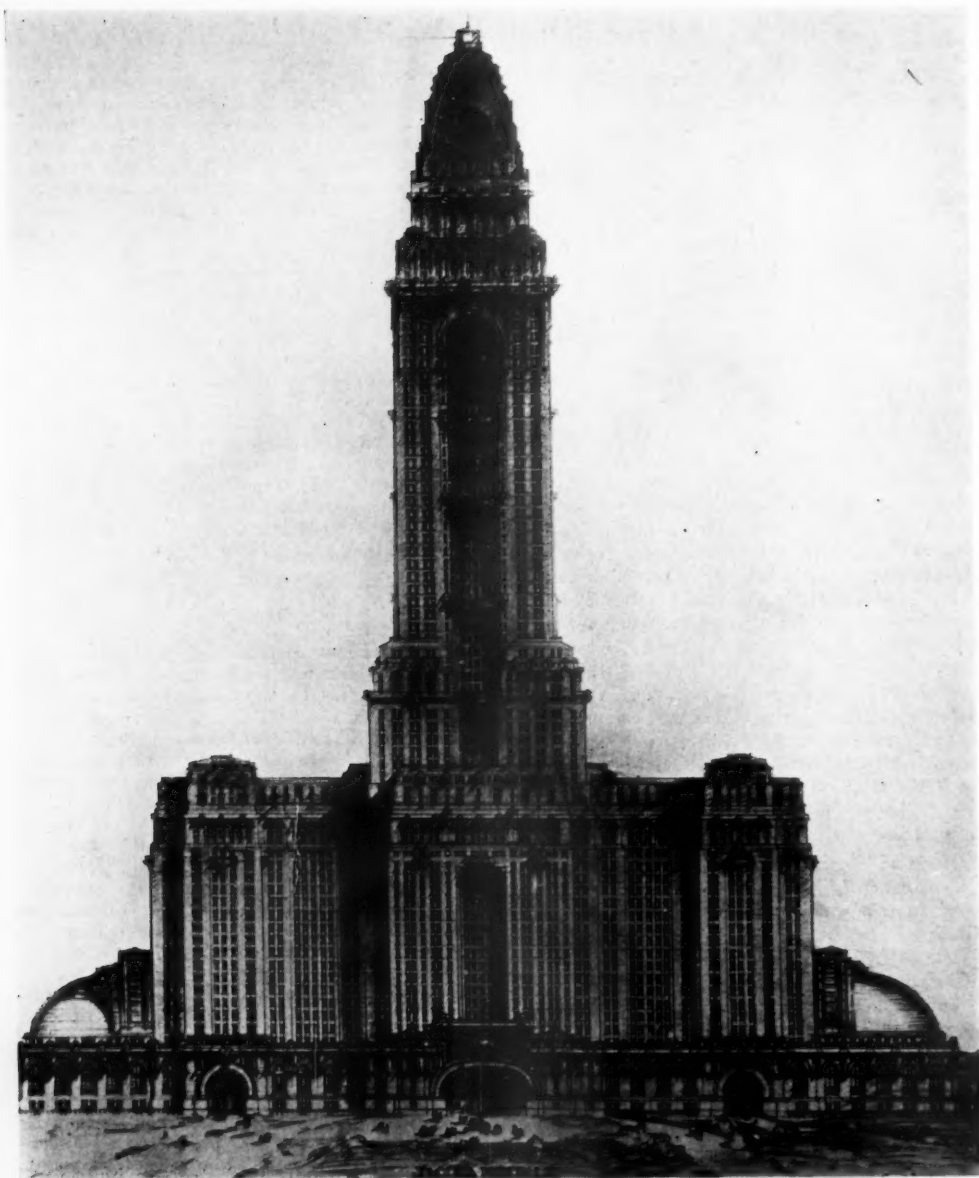
"The Greeks gradually borrow from the Spartans, and, in general, from the Dorians, the important characteristics of their habits, régime and art; the Dorian harmony, the exalted choral poesy, many of the ceremonies of the dance, the style of architecture, the simpler and more manly dress, the more rigid military discipline, the complete nudity of the athlete, gymnastics worked up into a system. . . .

"Under Solon there were already three large public gymnasia and a number of smaller ones. The youth of sixteen and eighteen years passed his hours there as in a *lycée* of day-scholars arranged, not for the culture of the mind, but for the perfect development of the body. . . .

"Some among them renew the exploits of fabulous heroes. Milo, it is said, bore a bull on his shoulders, and, seizing the rear of a harnessed chariot, stopped its advance. An inscription placed beneath the statue of Phaylos, the Crotonian, stated that he leaped across a space fifty-five feet in width and cast the discus, weighing eight pounds, ninety-five feet. Among Pindar's athletes there are some who are giants.

"You will observe that in the Greek civilization these admirable bodies are not rareties, so many products of luxury, and, as nowadays, useless poppies in a field of grain; on the contrary, we must liken them to the tallest stems of a magnificent harvest. . . .

"Alexander, at the Granicus, charged like a hussar, and was the first to spring, like a tumbler, into a city of the Oxydracæ. A bodily and personal mode of warfare like this requires the first citizens, and even princes, to be complete athletes. . . .



Courtesy Wide World Photos

THE MOLE LITTORIA—ROME
MARIO PALANTI, Architect

THE NEW RISORGIMENTO

"A little farther on, at Phaselis, on seeing a statue of the philosopher, Theodectes, in the public square, he returned after his repast to dance around it and cover it with crowns. To provide for tastes and necessities of this sort, the gymnasium was the only school. It resembles the academies of our later centuries, to which all young nobles resorted to learn fencing, dancing and riding.

"Plato, Chrysippus and the poet, Timocreen, were at one time athletes; Pythagoras passed for having taken the prize for boxing; Euripides was crowned as an athlete at the Eleusinian games."

It is a pity not to quote the whole chapter, which ends:

"The Greeks were concerned about truth before they were concerned about copying it; they were interested in veritable bodies before being interested in simulated bodies; they devoted themselves to forming a chorus before attempting to sculpture a chorister. The physical or moral model always precedes the work which represents it; but it is only slightly in advance; it is necessary that it be still present in all memories the moment that the work is done. Art is an expanded and harmonious echo; it acquires its fullness and completeness when the life, of which it is the echo, begins to decline. Such is the case with Greek statuary; it becomes adult just at the moment the lyric age ends—in the period of fifty years following the battle of Salamis, when, along with prose, the drama and the first researches in philosophy, a new culture begins. We see art suddenly passing from exact imitation to beautiful invention. Aristocles, the Æginetan sculptors, Onatas, Canachus, Pythagoras of Rhegium, Calamis and Ageladas, still closely copied the real form as Verocchio, Pollaiuolo, Ghirlandajo, Fra Filippo and Perugino himself; but in the hands of their pupils, Myro, Polycleitus, and Phidias, the ideal form is set free in the hands of Leonardo, Michael Angelo, and Raphael."

It must not be presumed that the study of geometry, philosophy and poetry were neglected in ancient Greece. They were a part of the curriculum and went hand in hand with boxing, running and basketball. It will be recalled, however, that books or scrolls were few in number; a dozen or so were soon absorbed in the pauses between chariot racing and javelin throwing. The young men would pass their rest periods in Platonic Dialogues or listen to the wisdom of Socrates while he shaped the marble of Pentelicus.

The marvelous age of the Renaissance in Italy was the result of conditions not unlike those that obtained in ancient Greece. There were the same strong, hot-headed individuals (so wonderfully portrayed by Symonds in *The Age of the Despots*), the great athletes, poets, sculptors, painters, and architects. Men and women of culture (vid. *Il Cortegiano*) who loved beauty in all its forms, who lived in constant danger of their lives and whose standards while differing essentially from those of the present day, present a condition that should be carefully studied so that we may learn from them the incunabula of the Muses.

A quotation from *Art in Italy* shows certain striking similarities with conditions in Greece that produced as supreme works of Art as the world has ever known. A new art can be produced that will rival the old, and the "Mole Littoria" is the torch that Italy holds to light the way.

"The men of this period (15th Century) are obliged to be interested in one thing with which we are no longer

familiar, because we no longer have it before us and pay no attention to it, and that is the body, the muscles and the different attitudes which the human body in action presents to us. At this epoch a man, no matter what his rank might be, is expected to be a man of arms, skilled in the use of the sword and dagger in his own defense; consequently, and without being aware of it, he charges his memory with every form and attitude of the active or militant body. Count Balthazar de Castiglione, in describing a polished society, enumerates the exercises in which a man who is well brought up should be expert. You will see that gentlemen of those days have the education, and consequently, the ideas, not only of a master of arms, but again of a bull-fighter, of a gymnast, of a horseman, of a knight-errant.

"I require," says Castiglione, 'that our courtier be a complete horseman, and, as it is a special merit of Italians to govern the horse with the bridle, to manœuvre it systematically, especially horses difficult of control, to run with lances, and to joust, let him in these matters be an Italian among the best. In tourneys and passages at arms, and in races within barriers, let him be one of the good among the best of the French. . . . In cudgeling, bull-fighting, casting darts and lances, let him excel among the Spaniards. . . . It is well again that he should know how to run and jump. Another noble exercise is tennis, and I esteem it no light merit to know how to leap a horse.'

"These are not simple maxims confined to conversation or to books; they were put into practice; the habits of men of the highest rank were in conformity with them. Julian de Medici, who was assassinated by the Pazzi, is lauded by his biographer, not only for his talent in poetry and his tact as a connoisseur, but again for his skill in managing the horse, in wrestling, and in throwing the lance. Cæsar Borgia, the great assassin and able politician, possessed hands as vigorous as his intellect and his will. His portrait shows us the man of fashion, and his history the diplomatist; but his private life also shows us the matadore as we see it in Spain, from whence his family came. 'He is 27 years old,' says a contemporary, 'he has a very handsome figure, and the Pope, his father, is much afraid of him. He has slain six wild bulls, fighting them on horseback with a pike, and he split the head of one of these bulls at a single blow.'

"Consider men thus educated, with experience in and taste for all corporeal exercises; they are fully qualified to comprehend the representation of the body—that is to say, painting and sculpture; a rearing horse, a curvature of a thigh, an uplifted arm, the projection of a muscle, every function and every form of the human body arouse in their minds inward and pre-existing images. They can be interested in its members, and become connoisseurs through instinct, without any self-distrust.

"Such a man, when he is well locked up at home, and sees before him the fine form of a courtesan or of a Virgin, of a Hercules, of the Eternal grandly draped or with vigorous development of muscle, is more capable than a modern of comprehending their beauty and physical perfection. He will appreciate, without being educated in a studio, through involuntary sympathy, the heroic nudities and terrible muscularities of Michael Angelo, the health, the placidity, the pure expression of a Madonna by Raphael, the natural and hardy vitality of a bronze by Donatello, the twining, strangely seductive attitude of a figure by da Vinci, the superb animal voluptuousness, the impetuous movement, the athletic force and joyousness of the figures of Giorgione and Titian."

H. G. R.

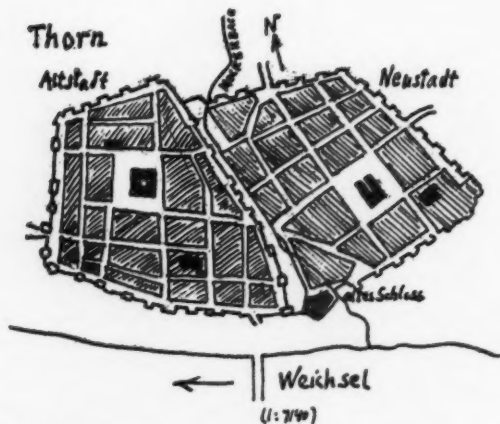
Planned Cities of the Middle Ages

TO REALIZE the scope, motives and aims of mediæval city planning, we must primarily pay attention to those hundreds of cities which were laid out along the regular lines of preconceived plans in the heyday of mediæval life and architecture, when the great Gothic cathedrals arose. For these cities and their plans eminently represent the full attainment of organized endeavor in mediæval urban development. "The Gothic towns *par excellence*," Felix de Verneilh¹ calls them in his important study on the *Villes neuves* of Southwestern France. De Verneilh was elated over the recent "discovery" of something so unique as mediæval cities with, at least in part, comparatively broad, straight streets, in which many generations of unsophisticated provincials had moved around without ever finding anything peculiar about them! Those straight streets became famous over night, and the excellent de Verneilh, growing ever more enthusiastic about them, once for all consecrated their fame by declaring that "these regularly planned cities reveal much better than the irregular ones the real tendencies and predilections of the Middle Ages!"

In reality, while many new cities were regularly planned in the Gothic period, there was also manifest an ever increasing tendency toward regularity in city plan-

the widening and straightening of streets in mediæval cities, operations which, although not frequent, do not lack a symptomatic significance. Incidentally, the method of expropriation, which variously was applied in the extension of cities, probably also found application in achieving the purposes just mentioned. As regards the more populous cities in particular, the desire to readjust the street conditions toward greater regularity and spaciousness seems so natural that we are not surprised at those mediæval ordinances which prohibited or regulated projective features and aimed at barring or checking the erection of stalls and other temporary structures in the streets. In Paris, then the largest city in Europe, some of the most notable regulations of this kind were passed.

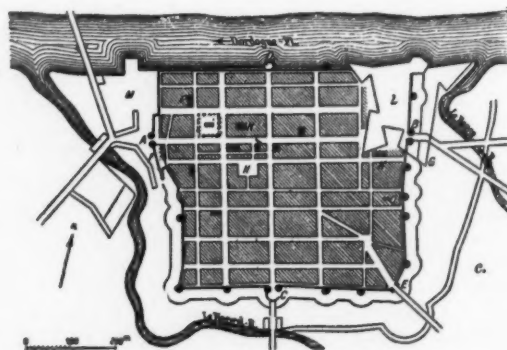
Thus, there is abundant evidence of the pursuit of regularity in mediæval planning, and it became most remarkably manifest in the numerous instances of city foundation during the 12th, 13th and 14th centuries. In various parts of Europe, notably in Southwestern France, in Germany east of the river Elbe, in the area which now constitutes Lithuania, Poland, Czecho-Slovakia, Hungary and Roumania, there arose regularly planned cities, set up for the purpose of serving definite political and economic aims. German colonization, with a view to political and economic expansion, originated many of the foundations in Central Europe. Those



PLAN OF THORN

ning in general. Numerous cities of earlier origin and of more or less irregular planning grew rapidly during this period, and in many instances the new quarters show greater regularity in the lines of the streets and in the form of the often square or nearly square blocks, which contrast with the very oblong or irregular blocks of the preceding centuries. A development in this direction seems to be in accordance with what might reasonably be expected, and with this tendency agrees also what we know, from documentary sources, about

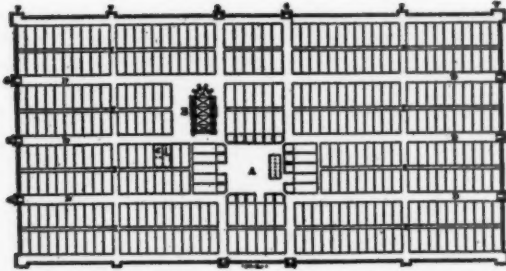
¹ Felix de Verneilh, *Architecture civile au moyen age dans le Périgord et le Limousin*. In "Didron's Annales archéologiques." Vol. VI. Paris, 1847.



PLAN OF STE. FOY LA GRANDE

of Southern France were partly founded by French kings or feudal lords, partly in the time of English domination of Guyenne and Gascony, by English rulers, above all by Edward I, who also was the founder of the New Winchelsea and of Kingston on Hull in England. Mediæval city planning attained its highest perfection in some of the regularly planned towns of Southern France, called *bastides*, *villes neuves* or *villes franches*. They must be judged entirely on the merit of their practical arrangement, for the aiming at unified architectural effect which is peculiar to the planning ideals of the Renaissance was wholly foreign to these plans. Some of them, for instance those of Monségur, Sauveterre de Guyenne and Sainte-Foy La Grande, are so well adapted to their

PLANNED CITIES OF THE MIDDLE AGES



PLAN OF MONTPAZIER

purpose and to the conditions of the site that they equal, in this respect, the best ones of any age, constituting veritable models of well-conceived regularity. This is excellently illustrated by the plan of Monségur, in which the streets are traced along straight lines, while their configuration is irregular in flexible adaptation to the character of the site, which evidently is an elevation of irregular shape, determining the outline of the wall. But this plan shares with the more regular ones the characteristic differentiation of the width of the streets according to their function and importance, the main thoroughfares, the so-called *carrières*, being broader than the secondary streets.

A feature common to all the plans is the square market place, across the sides of which the main streets are carried through in arcaded openings under the projecting upper floor of the surrounding houses, an arrangement which is admirable for the economy of space and for the resultant possibility of keeping the central area free from street traffic. The town hall usually occupied the center of the market place, close by which the church was erected in characteristic, diagonal position.

The square market place, rarely exceeding 80 metres in width, was sometimes centrally situated, but its position was certainly never determined by other than practical considerations. The main streets were mostly 8 meters wide; in at least one instance, Sainte-Foy La Grande, they were wider, 10 meters, sometimes narrower. Originally the houses seem generally to have had only two stories; most of them have had stories added in later times or have been entirely rebuilt.

It should be noted that the regularly planned me-



PLAN OF SAUVETERRE DE GUYENNE

diaeval cities, in France, are not confined to the southern provinces, but here the examples are most numerous and most peculiarly developed. There are about two hundred *bastides* in Southern France.

Montpazier has perhaps become best known, as its strictly regular plan, affording an example of really mathematical precision, has been frequently reproduced in works on city planning. While excelling the others in regard to geometric symmetry and regularity, it is, however, not to be considered as the best among them. Felix de Verneilh very rightly remarks that the plan of Sainte-Foy La Grande is to be regarded as better than that of Montpazier. Both towns were laid out on level ground favoring the plotting of a rectilinear net of streets, but the planner of Montpazier, Jean de Grailly, produced a scheme which is an exhibition of geometry, rather than well conceived, all the more as there is no artistic excuse for this regularity *à l'outrance*.

In the plan of Sainte-Foy La Grande, the order attained does not exclude a certain amount of variety, and a closer examination will reveal how skilfully the various parts are interrelated—it is, in fact, one of the most excellent among remarkable historical examples of regular planning on a small scale. Yet, Sainte-Foy La Grande was one of the earlier of those *bastides* that were laid out in the 13th century, from which most of them date. Montpazier was, in fact, founded later than Sainte-Foy La Grande, and we can, therefore, not agree with de Verneilh in expressing the opinion that the plan of Sainte-Foy La Grande is to be regarded as an improvement upon that of Montpazier. On the contrary, the latter is rather to be considered as giving evidence of decline. Presently, in dealing with the German plans, we shall be able to determine with greater certainty the effects of gradual declination, manifesting the dangers involved in too strict an application of regularity.

Although not within the purview of the present exposition, it ought to be briefly mentioned that documents of the greatest interest have come down to us, which admit of an insight into the procedures incident to the establishment of the *bastides*. Privileges were granted those who were willing to settle there. Building plots were sometimes sold or leased on easy terms; sometimes the land was granted free, as were also building materials. Each dwelling usually had a small garden, and, generally, extramural agricultural land was allotted to the settlers. These are circumstances which have their parallel in the city foundations of antiquity.

From France we turn to Germany. The numerous German examples are, as has been indicated, scattered over a wide area between the Baltic and the Black Sea, and they present a great variety, in various respects, while they also, like the French ones, have important characteristics in common. The French planted towns show outlines of greatly varying form, according to the nature of the site and the practical requirements. So do the German ones, but a rounded contour is particularly frequent, indicating that the facility of defense seemed especially important to the planners of these cities, many of which were outposts on foreign ground and thus very liable to being attacked. That many of them

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were established with an economic as well as a political aim in view is evident from the great number that were planted on the banks of navigable rivers.

A constantly recurrent feature, here as in the French plans, is a square or nearly square market place. It is almost always centrally situated, its position sometimes indicating the desire for symmetrical arrangement, from which, however, it should not be concluded that æsthetic pre-occupations were underlying the conception of these plans. What their authors had in mind was to plan for a "workable" community, meant to be quickly set up and to be so organized that it could hold its own in the competition with the well-established older communities.

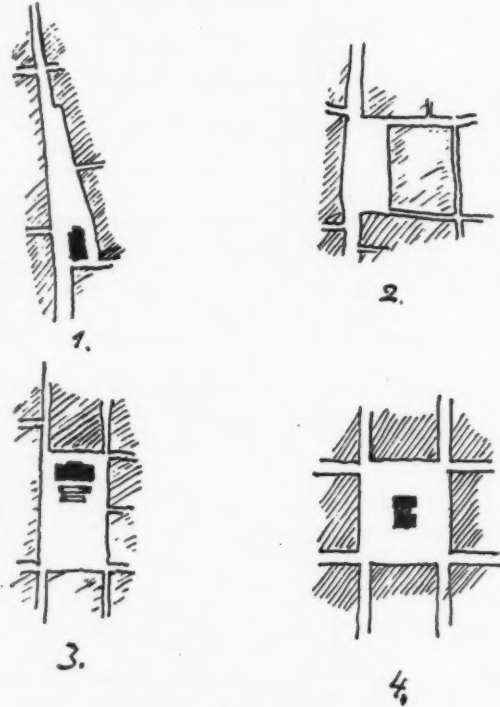
Alike in the German and in the French plans, space for the market was generally obtained in the simplest possible manner by leaving the area of, mostly, one block's width free. However, the arcade motive, which seems to have been rarely lacking in the French plans, is very exceptional in the German ones, but this difference cannot be considered an essential one.

Generally characteristic of the German examples is the great size of the blocks and of the market place. There were, of course, practical reasons for this, and the desire for obtaining a good-sized market no doubt often determined the dimensions of the blocks. In some instances, the square market is about two hundred meters wide, so for example in Cracow, where the market occupies an area corresponding to four blocks. As the towns were small, often extending over an area of only five blocks' width, sometimes less, the extensive market is very conspicuous both on the plans and in reality. It is a dominating feature of these plans, strikingly contrasting in this respect with the French ones, where the blocks mostly are small, as is also the market place, having rather the appearance of a subordinate part of the whole. Yet, of the German examples, as of the French ones, it holds true that the market place has no formal significance as an element of composition beyond being a necessary part of the plan for practical reasons.

This opinion is at variance with that held by a well-known German writer, Dr. Franz Meurer, whose study on the mediæval plans of northern Germany has aroused much interest and discussion.¹ According to Meurer, the market place, as it appears in the most regularly planned towns in the area east of the Elbe, typifies the form of perfection finally attained after a gradual development toward this form in German planning of the preceding centuries. In the opinion of Meurer, this gradual evolution of the market place toward more perfect regularity was of quite central importance in the German mediæval planning, and the market became a formative element exerting an ever greater influence toward increasing regularity in the plan conception.

As a matter of fact, the form which the market place assumed in the regular plans of the period of colonization was attained or very nearly approached in plans of an earlier date, which, although less regular, undoubtedly were preconceived, as is evident from the great similarity of their main features. In these plans, the

market place already has that rectangular, sometimes square form, which it necessarily must assume, when the planning approached to complete but primitive regularity, the market place then being formed by leaving one or two blocks free. In still earlier plans, the market appears merely as the widening of a main artery, the area of part of an adjoining block being used for the purpose. In a still more primitive stage, the widening was irregular in shape, often assuming the form of a very oblong trapezoid, as is shown in the diagram.



TYPES OF MEDIÆVAL MARKET PLACES OF WHICH NO. 4 REPRESENTS THE LATEST AND MOST IMPROVED TYPE

It seems clear that those practical requirements which determined the earlier forms were such as to make sure the adoption of the last type of the series when the people of the Middle Ages began to establish cities on very regular, yet in one sense primitive, plans. In Southern France, as in Eastern Germany and elsewhere, this form appeared in the regularly planned cities of the Gothic period. Identical or similar practical requirements and conditions caused its adoption in places so far apart that any immediate connection between the widely separated developments need not be taken for granted.

Thus the German regular plans, as well as the French ones, should be judged entirely on their practical merits, and it is impossible to agree with Dr. Meurer when he sees in the German examples "centralized compositions," which "made the unity of form their highest principle." Æsthetic considerations were certainly foreign to these

¹ Franz Meurer, *Der mittelalterliche Stadtgrundriss im nördlichen Deutschland in seiner Entwicklung zur Regelmässigkeit auf der Grundlage der Marktgestaltung.*

PLANNED CITIES OF THE MIDDLE AGES



PLAN OF CRACOW

conceptions which, however well answering their purpose, are to be considered as primitive from the architectural point of view.

As to the instances under discussion, unity of form can be spoken of only to the extent that the streets are traced along straight or nearly straight lines and the blocks surrounding the market are rectangular or nearly so—sometimes they even appear as perfect, or almost perfect squares. Furthermore, the streets often are of equal, or nearly equal, width. In consequence many of the German plans leave the impression of being somewhat schematic in a bad sense, and scarcely any example observed by the writer has as fine qualities of differentiation and of adaptation as are manifest in the best French examples. There is indeed evidence of the decline which too rigorous an application of geometric regularity is sure to entail.

Particularly interesting, from various points of view, is the plan of the new city of Thorn, the "Neustadt," which was laid out immediately adjoining the old city, the two cities having one wall in common, as is shown by the picture. There resulted an urban conformation of Siamese twin variety, which, however, by no means was exceptional in the Middle Ages. Some other instances are Stuttgart, Wesel (in western Germany), and Rostock (in Mecklenburg). It is to be observed that the new city of Thorn was an independent community, although having party wall with the old city and having been founded to answer the need of extension. It was less costly to extend the city in this manner than by

enlarging its area in all directions, enclosing it within a new wall farther afield.¹ Parenthetically, it may be noted that the peculiar kind of satellite city to which this gave rise was not the only one known to the Middle Ages. Sometimes the new community was established at some distance from the mother city. A well-known example is Neu-Brandenburg on the river Havel in Germany.

After this little digression, let us cast a glance at the plan of the new Thorn. It is immediately to be recognized as a skilful piece of work, which, thanks to the juxtaposition of the new city and the old one, affords an opportunity of comparing two plans of about equal size and dating from the years 1231 and 1264, respectively. The older plan—the city was founded by the Knights of the Teutonic Order—was also preconceived, as its appearance reveals, but its authors were apparently less concerned with geometric precision than were the originators of the later plan. For all its exactness, this one is a little masterpiece of well-adapted distribution within a restricted and well-compacted irregular area, about 1,200 feet wide at a maximum. The market place is an almost exact square of about the same size and dimensions as the block adjoining the market on its outside. We can easily realize how the planners proceeded after the first step had been taken of determining the outline of the wall in the manner best suited to the local conditions. Obviously, they did not fix the location and the size of the market at the outset. They first mapped out the street system, making it their prime concern to trace those two main lines of communication which cross each other almost in the center of the area and lead straight across it to the gates in the north and northeast walls. Then, after having decided that the market place should occupy the southeast corner between these two streets, they completed the tracing of the street system, dividing the southern part of the area by only one transversal street to insure obtaining a tract neither too small nor too large to provide space for the market.

The plans of the two cities, if compared, strikingly illustrate the rapid progress of city planning toward greater regularity in the course of the 13th century. Moreover, the fact that only 33 years separated their



PLAN OF MONTSÉGUR

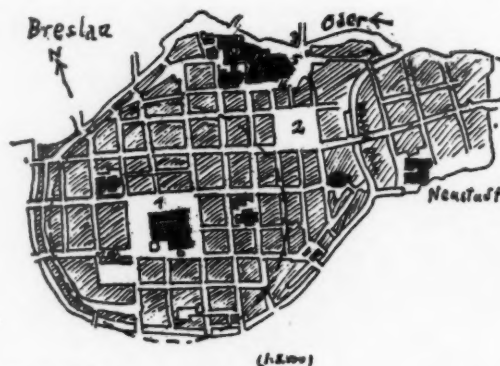
¹ It is also evident that interior, dividing walls might prove of great value in the case of a hostile attack or a revolt within the cities. There are some interesting observations with regard to this in Leon Battista Alberti's *Ten Books on Architecture*.

foundation bespeaks the importance of this century in the urban history of the Middle Ages. In no other century of this era were so many cities founded and laid out at once, and it was also a period of great urban extensions, many cities enlarging their area through constructing new walls far beyond the old ones. These operations, frequent also in the following centuries, were sometimes of so great a scope that the extended urban area was sufficient for the growth, not of decades only, but of hundreds of years. The new wall included vast tracts of agricultural land, to provide for the needs in the case of a siege, as well as for expansion. As a rule, it seems, mediæval cities proceeded to such extensions as soon as the need made itself felt, and only those cities whose populations increased little remained within the same wall for centuries.

Some of the greatest mediæval city extensions took place as early as the 12th century, of which Cologne and Magdeburg are notable examples. Only in the latter half of the 19th century were these two cities extended beyond their mediæval limits. In the year 1870, the city of Strasbourg had three times as many inhabitants as in 1580. However, the municipal territory had grown but little, since it had already been substantially increased four times in the period 1200-1450. These examples, communicated by Eberstadt, show the great scale on which mediæval extensions sometimes were undertaken. The area of Paris, to quote another notable instance, was enlarged in the 14th century through the erection of a new wall on the right bank of the Seine. The urban territory thus grew from 609 acres to 1,057 acres. This extension was so considerable that vast tracts remained unimproved as late as the year 1600, while gardens were frequent and often very spacious, circumstances of which we have trustworthy documentary evidence. However, it is to be observed that Paris, more than any other mediæval city, showed the tendency to over-exploitation of the central area. Its development was exceptional in that the rapid increase of the population—which probably exceeded 200,000 in the 16th century—actually caused the central quarters to become rather extensively congested as early as the Middle Ages. The Ile de la Cité and the adjoining territory on both banks of the Seine became densely crowded with buildings, which also lined the bridges.

While some congestion probably also arose in a few other mediæval centers, it nevertheless holds true that the actual condition of mediæval cities, in general, was very different from that state of overcrowding and congestion which we have long associated with their constitution. So many writers have drawn such a picture of mediæval cities that this long has been the popularly accepted idea of their status. In generalizing, these writers conveyed an entirely false impression of actual conditions, for spaciousness seems in reality to have been the general characteristic of the cities of the Middle Ages. Excessive accumulation occurred, but was entirely exceptional. Even so eminent an author as Albert Babeau, in writing of the French cities during *l'ancien régime*,¹ made this mistake, apparently unaware that the urban conditions of that period were mostly not truly

¹ Albert Babeau, *La ville sous l'ancien régime*.



PLAN OF BRESLAU

1. Ring. 2. Neumarkt. 3. Sandbrücke.
4. Ritterplatz. 5. Vincenzkloster. 6. Rathaus.

representative of the Middle Ages, but only of cities on mediæval plan, in which the more intense exploitation of land was a consequence of new construction and of extensive rebuilding. Elaborate and costly modern fortifications often contributed to achieving this result through making it more difficult to enlarge the protected urban area.

In reality, the dwelling houses of more than two stories (below the eaves) were rather rare in the mediæval cities, and private gardens or courts generally occupied the interior of the blocks to a great extent, leaving much space free which subsequent centuries gradually encroached upon. Under the circumstances, the narrowness of the streets, while rarely being inconvenient from the viewpoint of traffic, was offset by the abundance of open, interior space, and thus it appears that a truly economic use of space was an outstanding characteristic of the mediæval cities.

That they, as a rule, were far from being overcrowded and congested had been pointed out by various writers in recent times, with special emphasis by Eberstadt and by Geddes. In fact, a truly economic utilization of space, a really practical distribution and use of land, was the all-pervading characteristic of most mediæval cities, whether regularly or irregularly planned, whether laid out at once along the preconceived geometric lines of the *bastides* and the German new cities, or developed in slow and gradual growth along lines that often appear more irregular than they actually are and mostly were less "accidental" than they appear. However, in surveying the irregular plan configurations, seemingly infinitely varied as they are, we are apt to lose sight of their most essential common characteristic, namely: their quality of being positively practical and detached from aesthetic conceptions, yet often productive of effects appealing to the eye. In city planning, as in architecture, the Middle Ages tackled the problems with that directness, flexibility and adaptability which reveals that the rational application of principles of practice was more essential than the observance of canons of form. And this holds true of all their city planning in its manifold manifestations.

NILS HAMMARSTRAND.

Paris Letter

THE SALONS are the milestones of life in Paris today. During the summer each one of them attains a certain contact with nature—by the sea, in the mountains or in the forest. Since the reopening on the first of November, the Salon d'Automne gives us nature once more, nature seen from a thousand vantages, and expressed in every conceivable manner, and especially in daring manners. And many of those whose lives are generally ruled by respect for tradition refuse even to examine what they consider the handiwork of erratic artists. For my own part I confess that their endeavors, even the most unfortunate amongst them, seem worthy of interest and deserving of a little study. I think that perhaps an artist profits more by coming in contact with an Art quite unlike the art of the masters of his youth than in finding only progressively enfeebled reproductions of these old masters. After all, these men will remain masters and no one will express better than they the state of society in which they lived. But the most untraditional circles will show us the precursors of an Art appropriate to our new time.

Now, the Salon d'Automne is chiefly representative of the eccentric artist of today. But there are two kinds of these erratic beings: the first are eccentrics because they have the courage to tear away the cloak which has been given them ready-made, as their habit of thinking, and who have found it worthier either to abandon it entirely or retain it only in an improved state.

The second are eccentric because they think that since Delacroix, Maret, Carpeaux or Labrousse come, as they do, of the accepted order of things, it is sufficient merely to copy them to possess genius and to achieve success. And it is no simple matter for the public to distinguish the sincere from the shoddy.

It is indeed evident that those who seek only success follow in the train of the sincere artists, copying them more or less adroitly, and it is well that, in fact, the free and honest tendencies give the Salon d'Automne its note of originality and the characteristics of contemporary art.

Literature and all other arts, since the war, have been seeking the simplest and most expressive forms, just as the industrial régime has sought an economic and efficacious solution of its problems. The architecture of tomorrow will partake of both: expression found in extreme simplicity, and effectiveness obtained with a maximum of economy. In the architectural department of the Salon d'Automne we find some realizations of this program, which—though embryonic—are, nevertheless, praiseworthy. Evidently not a few of the forms have been chosen principally because they have been unused in the past. But the predominance of blank surfaces, of straight lines, of bays greater in width than in height, and the concentration of the elements we call decorative in a much smaller number of points, if indeed there are any, are the common characteristics of this new work. It is curious, then, for the architect to identify the repercussions of this modern movement in the buildings which he sees in course of construction every day, and to find traces of them in the work of the most classic artists.

As for that, if we look at things in an inverse sense, we will find among the revolutionists the most rigid observances of the cherished rules of the traditionalists.

This is because the classic school only concerns itself with the immutable rules of composition, and neglects the study of their adaption to the modern milieu and times, of which the revolutionaries think first of all. Accordingly, never-ceasing discussions rage among the young men in the ateliers of Paris.

These men came in numbers to the conference held on 10 November by M. Le Corbusier, a conference which was a sort of résumé of his book *Towards An Architecture*. This conference began in an original fashion. In the first ten minutes of it, the speaker said nothing, but had run off on the projection screen a series of the most characteristic amenities of modern life: a steamship, an automobile, a safe, an aeroplane, a business office (in polished oak, which we Frenchmen call American), a skyscraper, a hospital operating room, and many others. In the midst of these pictures he suddenly flashed upon the screen a hall in the chateau of Fontainebleau and the façade of a nineteenth century house in an ornate style. At the conclusion of this performance, M. Le Corbusier delivered an address which made his audience realize how unadaptable to the evolution of life were these ancient works which he had just shown. We can truthfully say that we have already recognized this fact, but even so this idea is decidedly worth restating in such a forcefully original and complete fashion, and the lecturer must verily have been astonished that, if men had thought this before, they had not drawn the necessary conclusions from it. Then he expounded a theory, on the order of geometry, which seemed to me none too substantial: that nature is to be symmetrical before all else, and that the right angle, consequently, will play the preponderant rôle in new architectural forms. As far as I am concerned, I feel that convenience and the facilities of construction justify such practice as much as any other consideration: but this argument is perhaps implied in his. At this moment it appears to me that, through this love of order and geometric coordination, M. Le Corbusier sings the praises of some of the most immutable rules of composition for classic design, such as have been illustrated by the competitions for the Prix de Rome. The influence of reinforced concrete construction was discussed with more force and logic. The ability to put bays in the angles of buildings, the ease with which enormous surfaces can be glassed in, and the resulting advantage in illuminating interiors imparts a new and sometimes shocking aspect to houses in which these factors have been given full play.

M. Le Corbusier then gave examples of his work and that of his friends. The resulting impression to me was that these buildings revealed a logical employment, disassociated from all prejudice, of modern construction methods, and yet the impression one gets from standing before an impassive and silent man. It proves without doubt that when these men traced their plans they were at the same time thinking of themselves as theorists as well as designers. They have not committed any

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outrage against their aesthetic convictions, but they have considered doing so, and that has kept them from committing certain necessary faults.

In any discussion of an impeccable logic, it is the passionate word—more than a simple statement of the truth—which stirs the crowd and inflames it.

But we must remember that we have seen only the photographs of houses which are scarcely finished and that the final, true effect depends upon such homely details as the color of the curtains, bits of ironwork and other touches which the inhabited house eventually acquires. Let us therefore withhold judgment; let us reserve it all the more for the works of the future which will heighten the quality of expression more than of utility: museums, churches, libraries, for example.

M. Le Corbusier, in fact, very wittily called the home a machine for living, but a closely united group of buildings might be included in this definition. It puts aside the public monuments which should be considered not alone from the point of view of their usefulness, but of their expression and permanence. For time has quickly condemned architectural forms not indigenous to their milieu. An old architect one day called my attention to the fishing boats: the sea, in the course of centuries, has taught ship builders fearful and costly lessons from which have resulted types of vessels perfectly adapted to seafaring conditions, in which the non-functional element was eliminated or each element was proportioned to its function; and yet expression had not been banished. It had been a matter of great care and thought or it could not have existed under such stressful circumstances: the color of the hull, the tapering tip of the mast, the small light spars, the cross-piece of the rudder with its delicately sculptured handle, bringing utility and life itself into community. It is this bond which seems lacking in the works of the neophytes of modern art. But in it there is a natural reaction against an art in which the link exists alone, so to speak, without support.

We must be thankful to those men such as M. Le Corbusier, who come to wake us from our idle slumbers, even though they awake us a trifle brutally. They do more good to their enemies than those who admire them without reserve.

M. Le Corbusier went on to warn his listeners, his most partisan friends, against poverty of expression, which should not be confounded with simplicity. He said, in simple and fortuitous terms, that he understood that simplicity, in art, should be the condensation of complex elements, and not the successive elimination of these elements, which would lead eventually to poverty of expression. This is of course a classic view, but one revived in the most expressive fashion.

M. Le Corbusier finished by affirming that a new consideration should enter into an architect's work: and that is 'urbanism.' No longer may an architect design a building in itself an end; he should constantly see it in its relation to the city, as formerly he saw a doorway or a window in relation with an entire façade. And this conference, like the book of which it was the résumé, is a smart whipping up of those who sleep profoundly in the security of their learned-by-rote formulas, and a subject for reflection for all.

G. F. SEBILLE.

The Wren Memorial Window

An appeal to the membership of the Institute has been made to defray the expenses of a proposed memorial window to Sir Christopher Wren, to be erected in the Ashmolean Museum at Oxford. The present plan calls for a four-light window, with lower panels six by two and a quarter feet, and upper panels two and one-quarter feet square, the cost of which is estimated at £100.

It is hoped that more than this minimum sum may be raised, the surplus to be devoted either to the installation of a larger window, or toward the endowment of the Lewis Evans collection of scientific instruments, for the express purpose of illustrating Wren's scientific developments and discoveries. Subscriptions to the Fund should be sent to Mr. R. T. Gunther, Magdalen College, Oxford, England.

American Academy in Rome Competitions

The American Academy in Rome has announced its annual competition for Fellowships in architecture, painting, sculpture, musical compositions and classical studies. The competitions, in the case of the Fine Arts, are open to unmarried men who are citizens of the United States; in classical studies, to unmarried citizens, men or women. Applicants are required to submit examples of their work and such other evidence as will assist the juries in making the selections.

For each Fellowship in the fine arts the stipend is \$1,000 a year for three years; in classical studies there is a Fellowship for one year with a stipend of \$1,000, and a Fellowship paying \$1,000 a year for two years. All Fellows have opportunity for travel. In the case of all Fellowships residence and studio (or study) are provided free of charge at the Academy.

Entries will be received until 1 March. For circulars of information and application blanks, address Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York City.

Personal

HARWOOD HEWITT has removed his offices to the Harris Bldg., Los Angeles, Calif.

CHATTEN & HAMMOND announce the removal of their offices to the Burnham Bldg., 160 North La Salle St., Chicago, Ill.

ARTHUR HEUN announces the opening of his new offices in the Tower Bldg., 6 North Michigan Boulevard, Chicago, Ill.

TISDALE & STONE announce the removal of their offices to the Independent Life Bldg., Nashville, Tenn.

THOMAS NASH has opened his new office in the Grand Central Terminal, 100 East 45th St., New York City.

The Fifty-eighth Annual Convention

And the Architecture and Allied Arts Exhibition

IRATHER imagine that the exhausted Institute members and delegates, and the hundreds of other architects and draughtsmen who are expected in New York next April, will sink back into the cushions of the Pullman, heave a long sigh of satisfaction, and sum it all up in the homely but very convincing phrase—"some show!"

Why do we think so? Because we believe that the show we are planning will rise to the heights epitomized by that little word "some." It is, after all, a summation that gathers in the shopworn superlative now reduced to rags and tatters by the copy-writer and transmutes their ancient significance into something that carries a conviction—which is more than the cheap dealers in superlative are ever able to achieve.

But the fact is that there will be gathered in the Grand Central Palace in New York City next April, from the 20th of that month until May 2nd, to be exact, such a variety of things to be seen that an enumeration is not possible. All that goes into houses, for example, as well as into every other kind of material, from the architect's first sketch to the last note in decoration or furnishing. More than that, it is not to be merely assembled but arranged, perfectly, in a harmonized grouping, so that the vast extent of the exposition will be broken into an orderly succession of units each of which will have its own peculiar

charm. Intimate sculpture for the small room will vie with friezes and pediments for the State Capitol and dancing dryads for the garden. Picture the friendly murals for the over-mantel and the splendid frescoes for the great auditorium—wander through gardens purring with the notes of pool and fountain, made formal with hedge and balustrade and terrace, and quiet with sequestered wooded glens. See whole towns developed as a unit, cities beautiful of the present, imaginative glimpses of great future metropolises to meet the needs of new democracies not yet dreamed of.

Ten foreign countries will display the best that sketch and drawing, plan and photograph will tell us of their present-day architecture. Each region in the United States will send its best. Building materials of every worthy sort, appliances, furnishings, fixtures, hangings, tapestries, *objets d'art*, rugs, stained glass, household conveniences and comforts will all be shown.

The Convention itself will hold its sessions in the great hall at the very center of all these attractions, yet the Convention Committee plans such interesting sessions that not an eye will wander or a head be turned while they are on.

In the next issue of the JOURNAL we will try to be a little more specific.

HARVEY WILEY CORBETT, *Chairman*.

The Secretary's Page

57. CHAPTER REPORTS. This month the Secretary has something from the following Chapters: WEST TEXAS, BALTIMORE, MINNESOTA, NEBRASKA, WASHINGTON STATE, GEORGIA, SAN FRANCISCO, KANSAS CITY, CHICAGO and WASHINGTON, D. C. Ten Chapters isn't a very large proportion out of all the Chapters of the Institute. The Secretary appreciates the thoughtfulness of many of the Chapter secretaries in attempting to make his job of reading what the Chapters are doing more easy, but at the same time he hopes that results will continue to grow.

WEST TEXAS held an enthusiastic meeting in Austin on 3 November and a special dinner in San Antonio on 19 November. Distances are nothing in Texas so the Chapters find it simple to meet in different cities. Example for some of the other chapters whose territories cover more than one city. Mr. Walker and Davy Boyd were doing more of their valuable tile work at San Antonio. The Secretary was much interested in the menu and will preserve the relic from Mexico attached thereto. And the WEST TEXAS minutes speak of the joint meeting of the three Texas Chapters to be held in December.

BALTIMORE as usual was busy. Letters of apprecia-

tion for the active work done by the Chapter which helped get a favorable vote of the citizens for the \$1,000,000 loan for the new museum. Several discussions were mentioned but where they tended was not indicated. Plans for the Regional meeting in Philadelphia were also discussed.

MINNESOTA reports a successful carrying out of a new experiment so far as it was concerned. The meeting was held in the cafeteria of the new building of the Retail Hardware Mutual Fire Insurance Company, and after the dinner, an excellent one, and a short business meeting, the owner and the architect took the Chapter on a tour of inspection of the building. MINNESOTA plans to do this sort of thing frequently in the future.

NEBRASKA reports a pleasant luncheon with Mr. Magonigle of New York as the Chapter guest. Why can't the local Chapters keep an eye out for the visiting architects and get together with them? Architects who can be the visitors ought to make a point of letting the local Chapters know of their presence. NEBRASKA'S minutes of the October and November meetings and the text of the proposed city ordinance for the registration of architects were in the Bulletin. This applies to the

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City of Omaha and is being put through because of difficulties in securing a state act for registration. The Secretary has not taken the time to read the text carefully but he is sure that the Chapter took counsel with the Institute Committee before taking any action.

WASHINGTON STATE's printed Bulletin, still with advertising, reports many things of interest. Congratulations on the new City Planning Commission of Seattle, which, by ordinance, must have one of its members taken from the WASHINGTON STATE CHAPTER.

GEORGIA reports its annual meeting with the election of new officers and a start for the new year. Discussion of the contemplated Regional Conference. The Chapter secretary called it a convention even though he knew it wasn't one. Note the spread of the Regional idea.

SAN FRANCISCO's printed Bulletins come in. This time the Secretary received copies directly and through the Washington office. This isn't necessary. Send them all to Washington and they will arrive through the proper channels at the Secretary's private desk. The Secretary prefers the standard size of Bulletin and has no particular choice as to the color of the paper. The Secretary likes the thought expressed by the Chapter Board when it asks the Regional Director of the Institute to sit in at all Directors' meetings, and that he be notified of all such meetings.

KANSAS CITY presents a very full program and much activity. The enthusiastic reports by delegates on the Convention and the Regional Conference are encouraging, as well as the endorsement by the Chapter of the formation of a Branch Office of the Architects' Small House Service Bureau. The transfer of Wyandotte County from KANSAS territory to the KANSAS CITY CHAPTER was also reported. Interest shown in the development of a Chapter seal. The next Chapter meeting, to be a joint one with some of the general contractors, contains a fine note of cooperation, together with the idea of placing the opportunity for the services of the Chapter before the Commercial, Rotary and Kiwanis Clubs of the cities and towns in the Chapter territory.

CHICAGO provided on 11 November another of its interesting meetings with two speakers of note. Would that some method could be evolved by which the Chapters in the less thickly settled parts of the country could secure the presence of such men as are possible in the great centers of the country. Perhaps closer touch between the Chapters and the help of the big communities may be able to tie in with the local programs.

WASHINGTON, D. C., reports one of its usual busy meetings and the steady interest in things of a civic nature. Hopes expressed that the work on the District Code would be finished in a month.

58. ARCHITECTURAL SERVICE. The following quotations from letters in an architect's office are most illuminating and throw light upon another phase of architectural service which has definite effects upon the standing of the profession.

LETTER FROM A MANUFACTURER: "There is a question in our mind as to the correct billing of the order. Do you want us to bill the School District for the gross amount and to send you our check for the trade discount of 20%, or do you wish us to bill the school at the net discounted price?"

THE ARCHITECT'S ANSWER: "As architects for the Board of Education all commissions obtainable through us, as purchasing agents, must accrue to the benefits of the Board. It is obvious that it is impossible for the architect to receive any commissions on any materials or equipment used in his work other than the commission paid him for his services by the client. Your bill, therefore, to the School District, should be for the net amount, discount of 20% allowed."

ACKNOWLEDGMENT BY THE MANUFACTURER: "As you request we will, of course, bill your client direct, allowing the 20% discount originally quoted to you. We are aware of the ethics of your profession, but have been required by some architects to allow them the 20%, and simply wanted the matter cleared to obviate any possible chances of mistake."

Rather nice, what? It is good to know that the manufacturer, at least, is aware of the ethics of our profession.

59. REGIONAL CONFERENCES. The Secretary believes that he holds the world's record for attendances at Regional Conferences, and he becomes more and more an advocate of their desirability. He is tempted to caution the Chapters who are so fortunate as to be the hosts of the Conference, against the danger of being led into extravagance in the matter of entertainment which will lead to their becoming a burden on the Chapter and ultimately make it impossible for smaller Chapters to dare to have a conference at their homes. Also, he feels that more time should be given to actual conference and less to entertainment. He has noticed, also, a singular thing, common to every conference he has attended: the presence of the local men in large numbers at the dinner and their remarkable absence from the sessions of the conference. MICHIGAN, at the Fifth Regional Conference in Detroit, made this quite conspicuous by providing ribbons of different colors, blue for the officers of the Institute, red for the visiting architects, and white for the local Chapter men. Perhaps it is an actual fact and perhaps it is merely camouflage, but it gives the thought of great pressure of business on the part of the local men. Even so attendance would take them away from their work for much less time than has to be given up by the visitors. And a conference should be a conference, not a gathering of a few enthusiasts. Can't we all be enthusiasts for the profession?

60. BETTER HOMES IN AMERICA. The Secretary has just received a most interesting package of the documents issued by Better Homes in America. Write to James Ford, Executive Director, 1653 Pennsylvania Avenue, Washington, D. C., and ask him to send them to you. They may cost you a few cents but they will be worth it.

61. THE SECRETARY'S PAGE. The writing of *The Secretary's Page* is really no joke for the Secretary. And he is, furthermore, attempting to make it of some value to the readers of the JOURNAL. He has found it, thus far, a good deal like talking into a microphone with the exception that if he says anything worth while into the microphone there are later a lot of responses showing interest. It was most gratifying, at the Fifth Regional Conference, to have one of the older members of the profession come across the room and say that the Page was being read and was worth while. And then, stopping

INSTITUTE BUSINESS

off in Chicago, to find a man that commented on the Page and said he read it regularly. And then to get home and find a letter about it. After a silence for fifteen months this was most encouraging. The Secretary has but one imagination, and if he could get the imaginations of many working along the lines of the Page perhaps we could develop a form which would be of real help to many of us.

EDWIN H. BROWN, *Secretary*.

Institute Business

Official Notice to Members

The Fifty-eighth Convention will be held in New York City on 20, 21, 22, 23 and 24 April, 1925. Information concerning Convention subjects, the Architectural Exhibition, Headquarters, Transportation, and similar matters will be sent to every member in due course.

Nominations of Officers

As required, the Secretary now advises each member of his privilege of nomination by petition, under the procedure indicated in Section 1, Article X of the By-laws. This section provides that any fifteen members belonging to not less than two Chapters may nominate by petition candidates for the office of Director and President, First Vice-President, Second Vice-President, Secretary, or Treasurer, about to become vacant, and any fifteen members from not less than two chapters within a regional district may nominate a candidate for Regional Director from that district, when the office is about to become vacant, provided said nominations are filed with the Secretary of the Institute not less than thirty days prior to the Convention at which the election is to take place.

The offices to become vacant at the time of the Convention are those of President, First Vice-President, Second Vice-President, Secretary, and Treasurer; and also those of three Directors whose terms expire.

Candidates for Regional Directors shall be selected from members in the regional districts where a vacancy is about to occur.

The three new Directors are to be elected to represent the three Regional Districts named below:

District	States and Chapters
No. 1.	Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island.
No. 2.	New York, Porto Rico, Virgin Isles.
No. 6.	North Dakota, South Dakota, Minnesota, Wisconsin, Iowa, Nebraska, Kansas, Missouri.

The names of all nominees filed with the Secretary of the Institute not less than thirty days prior to the Convention will be sent to each member at least two weeks in advance of the Convention.

EDWIN H. BROWN, *Secretary*.

The Octagon House, 15 January, 1924.

Allied Arts

There have been recently issued the report of the Jury of Award entrusted with the Judgment of the Centennial

Window Displays in the Fifth Avenue section and an announcement of an exhibition of small sculpture for which white soap has been used as a medium, and for which prizes have been offered by the Procter & Gamble Company, soap manufacturers.

From the point of view proper to the Committee of Allied Arts of the Institute, it seems to me that both these announcements have a distinct importance, particularly due to the fact that they indicate a steadily increasing appreciation on the part of large commercial interests of the importance of bringing such matters to the attention of qualified artists and arranging, as far as possible, that the public estimation of these things should be guided by qualified artistic opinion.

The wide publicity enjoyed by the Butter Woman at the Columbian Exposition in Chicago has been frequently referred to as illustrative of the lamentable lack of understanding of artistic matters, characteristic of that period. If, today, a window display or collection of sculptural objects executed in soap can be listed among the events of real significance to the artistic community, we may well feel that something gratifying has been happening in the relations between art and industry.

J. MONROE HEWLETT, *Chairman*.

Producers Research Council

The semi-annual meeting of the Producers Research Council, affiliated with the American Institute of Architects, was held at the Cleveland Hotel, Cleveland, Ohio, on 24 and 25 November.

Mr. D. Everett Waid, President of the Institute, attended with a dozen members of the Council, and addressed the meeting on the first day, expressing the interest of the officers of the Institute in the work of the Council and saying a few words about each of the several subjects which had been reported upon by Committees and brought up for general discussion.

Mr. W. R. McCornack, president of the CLEVELAND CHAPTER, attended the sessions of the Council on both days, and made a few happy remarks about the importance of coöperation between the architects and producers of building materials. About a dozen members of the CLEVELAND CHAPTER were also present on the first day, and Mr. Henry Turner Bailey, Dean of the Cleveland School of Arts, gave an excellent address on the work of the Council as viewed by an outsider.

Very interesting reports were rendered by the Educational Committee, the Bulletin Committee and the Exhibit Committee. The first mentioned committee is handling a proposed program of lectures with films or lantern slides covering the application of various products to building operations. The Bulletin Committee will supply the Scientific Research Department with bulletins on the latest improvements in materials, together with data as to new publications and old materials which have been superseded.

The Exhibit Committee is working with all members of the Council toward a full representation at the Architectural and Allied Arts Exposition, to be held in New York at the time of the next annual Convention.

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Industrial Relations

ARBITRATION: The Association of Building and Construction of Oregon through its Arbitration Committee has taken active steps to secure the passage of a State Law of Arbitration similar to that now in force in New York State, making legal and final the decision of the Arbitrator, where a clause is inserted in contracts in which both parties agree to submit disputes and differences to arbitration.

In a pamphlet issued 1 December by the Oregon Association is published the Arbitration law of New York State and the following facts with regard to it:

"The arbitration law in New York State provides that 'two or more persons can agree in writing to submit any actionable difference or controversy to arbitration, and such written agreement to arbitrate is binding and irrevocable.'

"It provides, further, that the arbitrators selected by the parties shall have power to subpoena witnesses and otherwise exercise the same authority as a judge. It also empowers the court to confirm the award of the arbitrator, which then becomes a judgment of that court, and enforceable like any other judgment. This award of the arbitrator is final and will be vacated by the court only if procured by fraud. The constitutionality of this law has been confirmed by the Court of Appeals.

"The following facts should be known regarding the arbitration law of the State of New York:

"A provision in a written contract to settle by arbitration a controversy thereafter arising out of that contract is valid, enforceable and irrevocable.

"The Supreme Court will order and compel an arbitration where one of the parties to an agreement to arbitrate refuses to proceed.

"The arbitrator may be any person selected by the parties. When appointed, the arbitrator signs an oath faithfully and fairly to hear and examine the matters in controversy, and to make an award that will be just, according to his understanding and interpretation of the evidence.

"The time and place of hearing is set with due regard to the convenience of the disputants. The arbitrator has the power to compel the attendance of witnesses, and the production of books and papers material to the issue.

"The award of the arbitrator may be filed in the office of the Clerk of the Supreme Court, and upon motion of either party, the court must confirm the award and enter judgment accordingly. This award becomes the judgment of that court, and is enforceable precisely like any other judgment.

"The award of an arbitrator may be vacated only on proof of fraud, partiality, or other misconduct by the arbitrator. Where there is evident miscalculation of figures, mistakes or persons, or any imperfection of form, the court may correct the award accordingly."

This pamphlet continues by giving all of the details of the scheme adopted under this law by the Arbitration Committee of the New York Building Congress, and quotes the clauses already adopted in contracts by a great many New York Architects at the present time, reading as follows:

"All disputes arising in connection with this contract shall be submitted to and determined by arbitration, as provided in the arbitration law of the State of New York, in a Tribunal of Justice to be known as the Court of Arbitration of the New York Building Congress, to be established and conducted by the New York Building Congress (Arbitration

Committee), under the rules of procedure as established by the Arbitration Committee of the Congress on 24 January, 1924."

It is interesting to remark here that of all of the cases already submitted to the Arbitration Committee in New York, a very large percentage has been adjusted by that Committee without the formality of taking evidence.

APPRENTICESHIP: From a recent report made by the Apprenticeship Commission of the New York Building Congress, of which Mr. Fenner is Chairman, it appears that in the New York District there are now 1,580 carpenter apprentices, as compared with approximately 500 when the Committee started its work, and in five other trades the increases have been in almost as large a percentage. It is more and more evident, incidentally, that the participation of the Architect in this apprenticeship training movement is everywhere being recognized as being essential to its success.

SELECTION OF CONTRACTORS AND SUB-CONTRACTORS: The Philadelphia Building Congress has recently adopted and issued a statement identical in principle with that of the Boston Building Congress on the subject of the desirable procedure in the selection of general contractors and sub-contractors.

The Boston and Philadelphia statements are exceedingly interesting in their detailed study of the subject, and are well worth sending for. A complete account of the Boston statement appeared in the JOURNAL for July, under *Building Congress Notes*.

ROBERT D. KOHN, *Chairman*.

New Members Elected

BOSTON, Harry B. Little, *Concord*; Richmond K. Fletcher, *Waban, Mass.*; BROOKLYN, John M. Infanger, *Queens, L. I.*; CENTRAL ILLINOIS, Ernest Lawrence Stouffer, *Peoria*; CLEVELAND, Herman J. Albrecht, Leo J. Barrett, John S. Kelly; FLORIDA, Fred J. James, *Tampa*; LOUISIANA, Herman J. Duncan, *Alexandria*; NORTH TEXAS, Thomas Dohoney Broad, *Dallas*; PHILADELPHIA, Philip Scott Tyre; RHODE ISLAND, C. Stephen Pierpont, *Providence*; SOUTHERN CALIFORNIA, Kenneth MacDonald, Jr., *Los Angeles*; SOUTH TEXAS, Clarence M. Sanford, E. E. Stowe, *Houston*; WEST TEXAS, George Louis Walling, *Austin*; Robert M. Ayres, Samuel C. P. Vosper, *San Antonio*.

Junior Members

Raymond Adolph Mattson, *Chicago, Ill.*; Peyton Wemyss-Smith, *Oklahoma City, Okla.*; Viggo F. E. Rambusch, *Washington, D. C.*

MR. G. FRANK WITMAN announces that the former partnership of Hamme & Witman, York, Pa., has been dissolved, and that he has entered into a co-partnership with Mr. James A. Royer for the general practice of architecture under the firm name of Witman & Royer, Registered Architects, with offices at 47 East Market St., York, Pa. Manufacturers' samples and literature are desired.

THE FIFTH REGIONAL CONFERENCE

Regional Conferences

THE FIRST MEETING OF THE FIFTH DISTRICT

My pleasantest recollection of the Regional Conference at Ann Arbor, Detroit, 18-19 November last (too late, unfortunately, for reporting in our December issue) is the indefinable mellow charm that radiated throughout the dining room of the University Club as Toastmaster Grylls picked off his victims one by one. From the moment when he arose to assume the chair, so to speak, the room became suffused, and the guests likewise, with a fine and permeating humor. (If I were to attempt a sub-division of the precincts of the hereafter along the dual conventional line, I would see that Grylls was put in Heavenly charge of all social gatherings; as for the hellish attributes of the other demesne, I would arrange endless and perpetual—the tautology is justifiable—conferences, so that on leaving one the participants would proceed immediately to another by subway.)

The evening at the University Club was a jolly one. The afternoon reception in the Michigan Union at Ann Arbor was a very pleasurable one. Steele's talk on education was as human and full of fellowship as the talk of most educators is not. Pond's contribution was one of those fortuitous events that seldom come off. In the wholly delightful structure he had designed, which rises on the very site where he dwelt as a youth, he told us the story of the founding of Ann Arbor, among other things, and he touched, at times a little sadly and cynically, I thought, on education and other matters. But it was worth while and even inspiring to feel that at least one architect had had such a rare and intimate association with a building, with the locality in which it was raised, with the traditions of the institution of which it is a part—for that sort of association in architecture is very precious and is likewise the fine soil for fine flowers. When a people loves its buildings, architecture is quite safe, and pumped-up admiration is a poor remedy for dearth of affection.

But the point is, in this particular matter, that the MICHIGAN CHAPTER was so generous and kind and hospitable that when the serious session of the conference came off the following morning—with no one present but the Chairman and the reporter at the opening hour, and with the members of the board straggling wearily in after a hurry-up morning session—it was a little hollow and lacked spontaneity, the only quality that can make one of these affairs go with verve and interest. I think that everyone who believes in the principle of regional conferences will agree, if he wants any really serious discussion, that it is wrong to mix them up with meetings of the Board of Directors or the Executive Committee thereof of the Institute. I have said that before. I say it again. The Board hinders a conference of this kind, simply because it has the effect of destroying the atmosphere of Locality, which is essential. The theory underlying regional conferences is that they shall permit and encourage groups having local questions to discuss them from a local point of view. Out of their discussions may then come suggestions of value. But if the Board members sit in at these conferences they not only

are like to get a little topheavy with nimbus, but the discussion is almost certain to lose its purely local flavor. A regional conference should be a very intimately regional thing, and intimacy is not encouraged by the presence of national guests.

All of which is predicated, of course, on the faith that these conferences should be a means of advancing the welfare of architecture and the profession. But the only way it can be done, it seems to me, is to keep the conferences local. If a program were arranged whereby the Board met, and the Regional Conference met, on the same day and in the same town, then they might come together in the evening for a little gayety. Heaven knows that the gayety is needed at the end of such a day. But to sandwich the jollification between meetings, with the Board recessing every hour or two to go somewhere or eat something, and the Regional Conference adjourning because the Board has to meet, neither the Board meetings nor the conferences can get very far.

Education and Apathy were the chief matters discussed, as I remember. I have already referred to Mr. Steele's talk, which left a deep impression I know, since many spoke of it afterwards. Mr. Morris at the evening meeting in the University Club elaborated at some length the tentative program for the expansion of the work of the Beaux Arts School of Design, and expressed the hope that ultimately the educational movement of which this school is the center would come under the leadership of the Institute. He was careful to disarm possible criticism of the ill effects that might spring from over-centralization by suggesting juries to be set up in different parts of the country, so that judgments would not only be quicker, but would not be biased by the flavor of a distant metropolitan center. Thus, new departures in design would find a more understanding consideration, and there would be a tendency to encourage the development as well as the tradition of localities.

Apathy, the other subject, came in for some sad and at times rather trivial talk. Director Hammond reported that some of the Chapters in the Fifth District had responded neither to letters nor to eleventh hour telegrams, requesting information as to whether or no they were sending delegates, and there was further melancholy debate over the hoary subject of inattentance at Chapter meetings. It was said that the experiment of feeding the members out of the Chapter treasury had been tried, and that making them pay for their own feed had also been tried, the results not seeming to be greatly different in either case. I hoped that someone would raise the very fundamental question as to whether or no the Chapter in its present form—at least, in the majority of cases—is not a bit out of date. There seems to be a terrible fear about examining the Constitution of the Institute to see whether perchance it needs a little repair here and there, and it might be that the trouble with Chapter meeting lies buried in that august and honorable document. It might be! Such things have happened, and constitutions do wear out, and the world does change, and Chapter meetings are slim, and always have been, and always will be, until some study is given to matters that lie at the root of the difficulty. But the question was not raised, and if any delegate took home any brilliant ideas on the

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subject, I confess to not being able to record them. ("The world is governed by the imagination," says Napoleon's seventh maxim. "The vice of our modern institutions is that they have nothing which speaks to the imagination."¹)

Secretary Brown explained with fervor and warmth that the trouble, in his opinion, was because men deliberately shirked their responsibility, were disloyal to the Institute, in fact, and that until there was developed a spirit of loyalty things would not change much for the better. I think he is quite right, but I also think it pretty true, in this world as at present arranged, that far too many men cannot be made to revere and adore and give their unassailable loyalty to something that costs them the trifle of twenty dollars a year. (As a corollary, the Institute can do but a fraction of the things that might be done to inspire the service it needs.) It is a sad commentary, I admit, but perhaps an examination of the Constitution or the By-laws, or wherever the price is fixed, might not be amiss in studying the reason for the persistence—the terrible and heartbreaking persistence—of our old friend, Apathy.

There was a bit of real talk over the question of disposing of Institute members without their consent as to which Chapter they preferred to join. ("The art of the police," asserts the twenty-eighth maxim of the Great Emperor, "is not to see what it is useless to see.") The matter is, of course, prescribed in the By-laws, but during the discussion again it seemed, at times, as though the whole question of Chapters, *per se*, might get to the front. But it never did. The Institute has taken great precautions in tying men up, for its organizational form is pretty rigid (following, of course, the theory of Chapter form that at present obtains), but here again there might be something worth studying. It is all linked up with Apathy, and in spite of the numerical increase of the Chapters, the Institute has a decided tendency to over-centralization, at least in the psychological effect on the members, who, by and large, generally look upon it as the George that will do it. But history affirms, I think, that the most useful forms of organization are those which keep a loose rein at home and see to it that their Localities become self-administering, self-preserving, and self-educative. Over-centralization is the desperate answer only. Paternalism is but the political word for dry rot. Constitutions ought to be examined periodically to see what rats and the rust have been doing, and in a truly advancing society, they would eventually be shortened to about ten or fifteen words. ("A constitution," said Napoleon in his fourteenth maxim, "should be short and obscure." The conditions surrounding the practice of architecture are changing, from what I hear wherever I go, and they need some study by thoughtful and open-minded people.

Let me not forget to mention the exhibition which had been arranged by the Thumb Tack Club in the Art Museum at Detroit. It seemed to me to be of exceptional interest, because it was restricted in quantity and there was a freedom from that preponderance of photographs which is so deadly dull. What captured my affection was

¹ Collected from the correspondence of Napoleon by Dr. K. J. Frederiks, published in Holland, 1922. Selected and translated by Richard Aldington.

the model of the proposed school of architecture for the University of Michigan. The design was Saarinen's and the model had been executed by his wife. There was also the much more brilliant and grandiose model for the Detroit River Front Improvement, imposing, convincing, and revealing the consummate skill and mastery of Saarinen the Master Architect, but I gave my heart to the model of the school, where it would be pleasant to dwell and to live and to pass away quietly, forgetful and even ignorant of the hurly-burly of traffic problems and the civic schemes that may inspire pride, but do not tap the deep sources of affection. But for the genius of the Saarinens there can only be gratitude, for they fashion lovely things in whatever field they essay.

It remains to be added that the Chapters comprising the Fifth District, of which Mr. C. Herrick Hammond is Regional Director, are CENTRAL ILLINOIS, CHICAGO, CINCINNATI, CLEVELAND, COLUMBUS, DAYTON, ERIE, GRAND RAPIDS, INDIANA, KENTUCKY, MICHIGAN, PITTSBURGH and TOLEDO, which suggests that the superstitious members have not yet been heard from, or else that certain silences bespeak their dread. C. H. W.

The Institute Gold Medal

The Gold Medal of the American Institute of Architects will be awarded to Sir Edwin Landseer Lutyens, R.A., F.R.I.B.A., the distinguished English architect, at the forthcoming 58th Convention of the Institute in New York City, 20-24 April. Sir Edwin, who—we are informed—is at present in India, where he is working upon the new Capitol building at Delhi—has accepted the invitation of the Institute to come to this country and to be present at the awarding of the Gold Medal during the Convention.

Scholarships

At the December meeting of the Boston Society of Architects, Mr. William Rotch spoke briefly of the Scholarship which now pays the holder fifteen hundred dollars a year instead of the thousand it once yielded, and Mr. Wallace Kirkman Harrison, Thirty-seventh Holder of the Rotch Traveling Scholarship, gave an account of his journeyings. This, thanks to the Secretary of the Society, we are able to report for our readers, as follows:

Mr. Harrison returned to this country last summer, having achieved an itinerary that should add distinction to his panoply. He was unable to go further east than Syria (that storehouse of archæologic treasure). Landing in France, Mr. Harrison travelled south, with stops—at frequent intervals—in Chartres, Arles, Rome, Palermo, Girginti, Catania, Alexandria, up the Nile to Luxor, Karnac, Thebes, thence from Alexandria again to Constantinople, back to Alexandria through the Suez Canal to Haifa, Beirut, Damascus, Baalbek. Returning to Alexandria, as it seemed the only way, an eventful voyage was made to Constantinople, where for four days the crew battled manfully with flames which momentarily threatened destruction. From Constantinople the voyage was resumed to Athens, Delphi, St. Luke's Monastery, on a steep crag jutting over the Helicon whence drift the

HERALDRY IN ARCHITECTURE

floating mists that wrap the beautiful hills of Delphi like the wraith of some lovely widow draping the evening sky, Olympia!

Returning to the east coast of Italy, stops were made for study of certain villas, with further time spent in Rome. A short trip to Normandy with a somewhat longer stay in Provence together with visits to Paris and Spain, used up, in all, the allotted two years.

Mr. Harrison's viewpoint and opinion were of interest. He finds there are but two kinds of Architecture—Classical and Picturesque. He is disgusted with architectural histories (in which view many of us will join) and believes there is no such thing as decadence. In what was supposed to be the apogee (or is it perihelion?) of Roman art, some of the most atrocious things were consummated, and vice versa! Take Aya Sophia—for example—which was designed in the very worst period of the decadence. It is a masterpiece, surpassed, if at all, only by the Pantheon, among the works of Imperial Rome. The Suleimanic mosque is not so good but still exquisitely lovely with its court in purple and white tiles, the tinkling fountain in luminous smalt, and the purple and white doves cooing and flapping to the accompaniment of the muezzins. The speaker showed a number of new slides illustrating the principal events of the trip and delivered his report in a simple direct manner, clearly and interestingly expressed.

The Architects' Club of Chicago

The question of a home for the architectural profession in Chicago has long been mooted, and recent developments along the lines of definitely establishing such a communal organization bid fair to bear fruit at last. At a gathering of a number of members of the CHICAGO CHAPTER last May, the subject of a clubhouse was discussed at length, and it was suggested that the Glessner house, on Prairie Avenue at 18th Street, long regarded as one of the best examples of the work of the late H. H. Richardson, would be a suitable home for the profession in Chicago. After some deliberation, Mr. John L. Glessner, owner and occupant of the house, was approached with an offer to purchase his home, not alone to house the proposed club, but to preserve the building itself as a monument and memorial. Mr. Glessner then came forward with an offer to donate his dwelling to the Chapter upon his death or removal prior thereto, on condition that the Chapter acquire and occupy as headquarters the Kimball House, directly across the avenue, until the Glessner house should be made available to it.

To carry out the mandate contained in the Glessner legacy, the Chapter invited the Illinois Society of Architects to cooperate, and committees, with power to act, were appointed, consisting of President Alfred Granger, George C. Nimmons and Richard E. Schmidt of the Chapter, and President Chas. E. Fox, F. E. Davidson and J. C. Llewellyn of the Society. These committees evolved a plan for forming a club to take over the Kimball residence; this plan was subsequently approved by the two organizations, and the Chicago Architectural Club was at the same time tendered an invitation to join the movement, which it accepted.

According to the contract entered into by these three architectural organizations, they will share all privileges

and benefits accruing from the Glessner legacy, as well as the maintenance costs, although the title to the building itself belongs to the CHICAGO CHAPTER alone, by the terms of the deed.

The Kimball house and land have been already purchased, we are informed, and plans for temporary occupancy are in hand. The three organizations will establish their homes within its portals as tenants of the "Architects' Club of Chicago," until such time as the Glessner home passes to the CHICAGO CHAPTER. Meanwhile the Kimball garage is to be remodeled into an atelier for the present Sketch Club. Nebulous as necessarily are plans at the present stage for the Glessner house, they include the establishment of a magnificent art gallery, a free architectural public library, as well as the amenities of club life—members' rooms, bedrooms, a grill, and so on—in addition to the quarters of the Chapter, the Illinois Society and the Architectural Club. The garage of the Glessner home will, in turn, be rebuilt to the requirements of the atelier of the Sketch Club.

The building is to be known as Glessner House, by the terms of the deed of gift, and will be preserved—with certain not inharmonious interior alterations—in the state in which it is turned over to the Chapter. The Richardson monogram, carved in the outer wall above the front entrance, and the portrait of the architect, will be retained as mementos of the man.

All members, in good standing, of these organizations are eligible to the Architects' Club of Chicago. The quota of one hundred "proprietary members," to subscribe \$1,000 each, has already been nearly filled. Three other classes of membership: regular, non-resident and honorary memberships have been provided for. Membership in the Club will likewise be open to representatives of allied interests—contractors, manufacturers, bankers, the press and others.

A very full and detailed account of the history of these proceedings appears in the *Bulletin* of the Illinois Society of Architects for November-December, 1924.

It is interesting to note that, while this agitation for a clubhouse for the profession in Chicago has been coming to a head, a similar-minded movement was manifesting itself in New York City. At the meeting of the NEW YORK CHAPTER on 10 December last, it was announced by President Benjamin Wistar Morris that he had appointed a committee to investigate the feasibility of a coalition of and a joint home for the various arts and crafts of the city. The committee consists of Robert D. Kohn, *Chairman*; A. C. McKenzie, Burt L. Fenner, F. Y. Joannes, J. E. R. Carpenter and W. H. Beers. Its appointment followed upon Chapter action taken at the meeting of 12 November.

Heraldry in Architecture

At the December meeting of the Boston Society of Architects Mr. Pierre de Chaignon la Rose addressed the members and his words have been preserved for us in the impeccable prose of the Secretary, from which we are privileged to quote as follows:

"The President introduced Mr. la Rose," says the Secretary, "in a most felicitous manner, alluding to the

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well-known flair of the profession for the treatment of wall spaces with inscription and heraldic devices. Architects' drawings are often non-committal, merely stating that: 'Inscription is to go here,' or 'Inscription furnished later by Owner,' the implication being that the whole matter is up to the client and that the architect (or draughtsman) has done his duty when he indicates that there is to be something of that nature 'here.' The irrepressible and irresistible glamour of heraldry seems to exercise a *devolu* on the designer that often leads him by strange ways into tortuous paths. (The shining ladder of heraldry is paved with slippery stones which often thwart, by their seeming complexities, the valiant efforts of our most distinguished artists to grasp their key, as one might say.) Mr. la Rose will tell us something of our sins and illiteracies and help us to rub out the blots on our escutcheons."

Thus presented, Mr. la Rose spoke for over an hour, giving one of the most interesting *causeries* that it has ever been the privilege of this Society to hear. It is much to be regretted that a literal transcript of his remarks, delivered in a delightfully informal, and at the same time scholarly, manner, cannot be given. Heraldry, while now a dead art, ought not to be obscure or difficult. The mediæval architect knew many things that are not now within our purview. Iconology was thoroughly understood by him and he knew when and where to employ it. Nowadays, the problems and intricacies of modern construction interfere with the legends of the Saints and the gestes and joustings of Godefroy de Bouillon and Bertrand du Guescliu. It is not true that the more heraldry one splashes on a building the more mediæval it is, for the mediæval architects used heraldry very sparingly. The speaker cited the case of a great university where a Gothic dining hall is being built. The room is richly embellished with carved bosses, and the draughtsman conceived the idea of placing a shield at each boss. The problem was what to put on some 350 shields. Mr. la Rose was called on, and after eliminating over a hundred of these shields finally unearthed motives for the balance, but it was an unnerving task.

Heraldry, while an interesting phase of mediæval art, cannot be learned from textbooks; the sources are few and very difficult to trace. It began about the time of the Second Crusade, say A.D. 1150; and it was purely a military necessity. Previous to that time, armor did not cover the head, but when the helmet arrived it became necessary for the soldiers to distinguish their leaders. There were three ways of marking the leader: on the banner, the surcoat, and the shield. Each leader chose his own markings and it was not considered cricket for one knight to appropriate the markings of another. *Arma Sunt Distinguendi Causa*. The distinguishing marks were purely arbitrary and really had no other meaning than that they might be easily seen at a little distance. This rule of visibility applied equally to the colors, which were chosen with the same purpose in view. The heraldic colors were red—always a pure bright red; blue—not a dark blue, but a middle clear blue; green—which was a rich bright green high in value; and black. Then there were added white, or silver and yellow or gold, which were called the "metals." Modern text books add purple, which is called a barbarous color, as it cannot be made out well at a distance. These markings applied on the surcoat gave rise to the phrase "coat-of-arms" which is the common term of designation. "Armorial Bearings" or simply "Arms" is more correct and comprehensive.

The word "Gules" (red) is thought by some to refer

to a particular shade of red. This is not so. Gules is any red you choose, provided it is bright and can be easily distinguished. The same is true of all heraldic colors.

In combining these colors one must never put color on a color or metal on a metal, as this tends to confuse vision. Always separate colors or metals by a clear line or space, just as in the best stained glass. The motive is comparable to the present day problem of the yacht club flag; visibility is the main factor.

In the earliest designs the patterns were geometrical. They meant nothing and the first user had the copyright on them. The arms of Hungary, for example, are four horizontal stripes (that this means Hungary is divided by four rivers is the pure invention of the Herald who came on the scene after heraldry had become corrupted).

The Hohenzollerns divided their shield into four quarters for the reason that it could be easily distinguished. It was considered sporting for two knights to use the same pattern if the colors were different. Mottoes were a much later invention. They were of very little use as followers were unable to read, but knew their leaders' colors and devices. The device, or crest, came into use quite early and there are many types. The lion, the dragon, and the eagle were used to inspire terror; other devices served various cognizances.

These were always conventionalized and made of suitable size to fit the space on the shield. The Rebus type was early popular, such as three hands for Tremain, and three little rabbits each playing a bagpipe for Hope-well. Of the famous Medici arms, there is a wonderfully romantic explanation of the six red balls on a gold field, which goes like this: Gorgonzola di Medici, one of the earliest members of the family, was supposed to have slain an enormous giant who ravaged the whole district of Boscotrecasa. Armed with a knotty club, from the head of which depended six iron balls by means of chains, this ferocious creature spread terror and gore all over the fair Campagna. Gorgonzola neatly split his wizend, for which brave deed Charlemagne gave him the order of Antipasti and said: "Thou may'st emblazon thy scutcheon with six balls gules on a field d'or, that all may see and tremble at thy prowess." As a matter of fact, Charlemagne antedated heraldry by several centuries, and the Medici arms were probably a facetious representation of the mediæval bolus, or spring cathartic, Medici being derived from Medico. (The explanation of the pawnbroker's sign was very interesting; it cannot be given here, but will be sent to anyone on request in a plain sealed envelope. Please inclose 10c. in stamps to cover postage and composition, foreign countries 20c.) Those interested in chivalry and Charlemagne will enjoy Le Gab d'Olivier from *Les contes de Jacques Tournebroche*.

The speaker told a number of extremely delightful stories in connection with names and devices illustrating the curiosities of philology and iconography. Heraldry lasted almost exactly three centuries, and it is only during that period that it is worthy of study. After the fall of Constantinople in 1452, it became unnecessary to mark the leader as he was no longer completely encased in boiler iron.

The civilizing influence of gunpowder had destroyed the old chivalry and made it very unfortunate to be hit by a cannon ball while enveloped in a steel capsule. Consequently true heraldry declined and became debased and underwent all sorts of mutations. As long, however, as human vanity lasts and pride holds her sway, the college of heralds will be busy composing new designs, devices, crests, mottoes and trappings. Legends will have to be

FROM OUR BOOK SHELF

invented in support of all these, and the language of the heralds will grow more and more complex and technical. For nearly five hundred years (since 1450) the cult has thrived, often with very interesting and beautiful results—but the art of true heraldry is a dead one.

A fourth type of marking was the imitative design which is so familiar as to need little comment. Yinpraisers or designs in a little circle were used in the 15th, 16th and 17th centuries. There are many beautiful examples.

The term seal seems to cause all kinds of trouble to architects, designers and others. Seals, which came into use long before heraldry was ever thought of, must not be confused with "arms." The seal is simply a mark to attest a document or a signature and is a little thing, finely wrought, to be examined under glass, not to be inflated a hundred diameters and placed on the walls of a building. Many people refer to "our family seal" when they mean Armorial Bearings. When Guy de Puyssange, Sieur de Bohaine, returned home from the wars, to warm his rusty joints at the ancestral hearthstone, or quaff great horns of Yuletide mead¹ it was natural that he hang the "olde shilde" on a peg on the wall while Yseult of the White Hands draped wreaths of smilax and mistletoe about it. The decorative value thus became apparent but it is an architectural mistake so to treat the seal. One may, however, place his arms on or in a seal. Great care should be exercised to have the shield and helmet, when used together, of the correct size. The shield must not be too big.

The speaker told many interesting things about our state and federal arms which are, strictly speaking, not quite in the correct heraldic manner. There were some fifty of Mr. la Rose's most beautiful drawings pinned up on the walls, which were of particular interest as the story gradually unfolded. The drawings—all done in the best 13th century manner, though with modern details—proved conclusively what a very beautiful simple and inspiring thing true heraldry must have been.

Education

Mr. Eliel Saarinen is now in residence at the University of Michigan as Visiting Professor in Architectural Design and will teach a graduate class of students during a period of three or four months.

Where No Man Sees

In the recently published *Memoirs of Sir Francis Fox*, an eminent English engineer, there has come to light the story of W. A. Walker, a marine diver who engaged to undertake as difficult a piece of building repair as perhaps was ever approached. Early in the present century Winchester Cathedral was by way of becoming a fallen ruin. The cracks in its structure were too ominous to be disregarded. Walls and vaulting were being torn apart by the subsidence of the whole structure into the earth. There was nothing to be done but to go to the bottom, get below to the underpinning,

¹"The mead from the flower, and the ale from the corn,
Smile, sparkle, and sing in the buffalo horn—
The horn, the blue horn cannot stand on its tip,
Its path is right on from the hand to the lip," etc.

"The Circling of the Mead Horns" from *The Misfortunes of Elphin* gives a vivid picture of these carousals, now, alas, almost completely forgotten.

and trial pits soon disclosed the fact that Winchester Cathedral rested on tree trunks and logs, laid crosswise, and beneath which was peat so porous that a hole dug at once filled with water. At a depth of eight feet below the peat there was found a bed of flint and gravel, a solid foundation to work from.

To float the structure on a complete slab of concrete was the first idea, but it was abandoned through fear that the variation in weight would either cause the slab to crack or the structure to list. Piling was out of the question, for the condition of the walls would not permit any vibratory operations. Sir Francis Fox wisely decided that there was nothing to be done but to remove the area of peat—already compressed more than three feet by the weight atop it—and for five and a half years the diver Walker plodded at the job. He worked in the total darkness of muddy water, picking the peat out by sections from under the walls, and filling the thus excavated cavities with concrete. The cathedral now stands on a bed of rock and while it will never recover from the stress of the subsidence, the wall cracks have been stopped in a proper way and the fabric is safe for centuries.

All honor and glory to W. A. Walker, and all praise to Sir Francis Fox for acknowledging his debt to a British workman of the great school that is, after all, our very precious inheritance.

FRANCIS SMALL.

From Our Book Shelf Three Old English Masters

In the individual architect one very frequently finds a transition from the urgent desire for originality in early work to a sober determination to be guided by sound precedent in later work. As with an individual so with a period.

Chambers was born in 1726 and had the imaginative and individual work of Hawksmoor and Vanbrugh behind him. His great work is Somerset House, a very noble, dignified and restrained building, admirably adapted to its position. Mr. Edwards² says of Chambers: "It is also obvious that he had a unique perception of the impressiveness of self-restraint, the restraint which indicates power and solid cultural worth." This is a high tribute and in this case a deserved one.

Chambers was born in 1726 and Somerset House was begun 1776; he was therefore 50 years old. He had traveled extensively, the East Indies and China, as well as Europe, and was a keen observer and student, and was well equipped to undertake work so important as Somerset House.

In all his work the sane sober reserve is seen, and the illustrations include the charming Town Hall at Woodstock, and the work at Kew. His was a wholesome, sound influence and he so revered the grand conceptions of Rome, that, as Mr. Edwards points out, he was very impatient with the beautiful work of Adam, because it was Greek. "His anger with the Greek revivalists was justified in so far as they busied themselves with learned tricks of detail and deliberately sought to cut us off from Rome, "the grandeur that was Rome." We may

² *Sir William Chambers*. By A. Trystan Edwards. Scribner's. The second of the series, *Masters of Architecture*.

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be thankful to Chambers in that he gave us something of this grandeur in Somerset House."

Hawksmoor, born in 1661, lived and worked in close connection with both Wren and Vanbrugh, and Mr. Goodhart-Rendel² points out how difficult it is to determine the part which any one of the three played in the work where they were associated. From work which Hawksmoor undoubtedly designed and executed it is, however, evident that he was a designer of ability and a capable architect in the broader sense.

The 18th century was wholly devoted to classic precedent, and Gothic, so slow to lose its hold in England, was discredited. It was Hawksmoor who perpetrated the Westminster West Towers, and Mr. Goodhart-Rendel suggests that the Boston stump was the prototype of such towers as St. Anne's and St. George's in the East; and from both these it would seem as if Hawksmoor believed that the aspiring lines of Gothic could be interpreted with Classic detail and its strong emphasis on the horizontal. Later Hawksmoor freed himself from this eccentricity of originality, and, in more logical and much more beautiful manner, designed the portico and Tower of St. George's Bloomsbury.

Mr. Goodhart-Rendel gives an excellent analysis of the designer and the architect (a distinction much more marked in England today than here) and shows how marked was the line of division between the two. All the more remarkable then that Hawksmoor, as also Wren, should have so largely combined the two.

There is a delightful paragraph on "modern" architecture. Here are some gems: "The romantic architect places a pinnacle to weight a particular point of his structure; the 'modern' architect places an obelisk to emphasize a particular point of his design." And again, "The 'modern' architect says 'pilaster' when he means 'pilaster,' and the only criterion by which he can be judged is by whether or not 'pilaster' seems to us an intelligent remark for him to have made; not by whether or not the pilaster itself strengthens the wall behind it."

Hawksmoor made steady progress in design, and it was a hand and brain sure of itself which designed the Mausoleum at Castle Howard.

Vanbrugh is known chiefly by Blenheim and Castle Howard, and, if one can reconcile oneself to the presence in England of pseudo European palaces, Vanbrugh certainly had a theatrical ability to design on a large scale, and with a more than theatrical, a really architectural, sense of composition. Mr. Barman³ makes a good apology for Vanbrugh in the monograph, but he dwells largely on the personalities of his architect and of the various great, and disagreeable personages, with whom and for whom he worked, until one wonders how any one man could have both conceived and carried into execution such vast undertakings.

Vanbrugh certainly looms up as a remarkable personality rather than as a master of architecture. Speaking of which one wonders how the editor could have used a cover sheet for these volumes so futile and utterly immature as the design on this sheet.

Vanbrugh was born in 1666 and took up architecture

in middle life. It is like DuMaurier and De Morgan, starting late in life as writers, and producing at once and without effort masterpieces. So Vanbrugh started with Castle Howard and followed immediately with Blenheim, and Mr. Barman truly remarks that he had "a fund of native invention far in excess of that of his contemporaries; a man who would have steered towards the Charybdis of looseness and redundancy rather than fall a prey to the Scylla of polite and accomplished boredom." He himself states that he is concerned with "state, beauty and convenience" and the latter had but little influence with him. He was concerned primarily in "state." From this point of view he is to be judged, and not from the point of view of what he did nor attempt. The modern architect is primarily and necessarily concerned with the object and use of his building. "Convenience" is a term to cover this, and the modern architect must make his building fit in every way for its use; only after this is accomplished is he in a position to express the use in terms of beautiful architecture.

Vanbrugh had an aim wholly different and the aim he set out to reach he attained in a remarkable degree.

There is an excellent essay on one of the great qualities in architecture, the whole as distinguished from the various façades, which is well worth reading.

R. C. S.

Obituary

George C. Mason, F.A.I.A.

Elected to Fellowship in 1875

Died at Ardmore, Pa., 22 April, 1924

The PHILADELPHIA CHAPTER, in the death of Mr. George C. Mason, has suffered the loss of another of the older group of architects, who, a generation ago, were the leading spirits in the advancement of the profession in Philadelphia.

Mr. Mason's kindly spirit and broad scholarship endeared him to his associates, while his architectural ability reflected credit on his profession.

Mr. Mason was active in the affairs of the Institute and of the Chapter, not only in Philadelphia, where he practiced for many years, but also in Newport, Rhode Island. He was for some years Secretary of the Institute, which position he administered with his customary thoroughness and precision. The first architectural exhibition held in Philadelphia shortly after the opening of the then new Art Club, about 1892 or 1893, was largely due to the active interest and discriminating judgment of Mr. Mason. During his active professional career Mr. Mason more or less divided his time and the volume of his practice between Newport and Philadelphia.

Mr. Mason was born at Newport, Rhode Island, 8 August, 1849. He was educated at Yonkers Military Academy in New York. At the age of eighteen he entered his father's office, and later associated with him in the practice of architecture.

His architectural work in and near Philadelphia includes Mrs. Walter Massey's house at Torresdale, two houses for Mr. Thomas Baird at Villanova, a house for Mr. John Baird at Haverford, Mr. Walter Lippincott's house at Bryn Mawr, and the Delancey School, Broad and Pine Streets, and alterations at St. Stephen's Church

¹Nicholas Hawksmoor. By H. S. Goodhart-Rendel. Scribner's.
²Sir John Vanbrugh. By Christian Barman. Scribner's.

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in Philadelphia itself. In Newport, R. I., he designed the Belmont, Zabriskie, George Warren and George Tifany houses and the War College at Coastus Harbor.

While Mr. Mason's buildings showed the work of the refined and painstaking practitioner, a great deal of his time was devoted to the literary side of his profession, where his scholarship and graceful expression found ready outlet. Among the books and manuscripts by Mr. Mason are: *Life of Gilbert Stuart, Miniature Painter*; *Reminiscences of Newport*, in six volumes, and *Life of Commodore Oliver Hazard Perry, U. S. N.* PERCY ASH.

Edward H. Glidden

Elected to the Institute in 1901
Died at Baltimore, 2 May, 1924

Mr. Edward H. Glidden was a member of the BALTIMORE CHAPTER of the Institute. He had always stood for a very high standard of practice; a man of undoubted ability and integrity.

Being a son of Mr. William Pierce Glidden of Cleveland and Damariscotta, Maine, the founder of the Glidden Varnish Company, his father naturally desired that he should carry on the business of manufacturing varnish. This, however, was not in the least congenial to his poetic spirit and he left his father's employ to take up architecture. He studied in Paris during the years of 1908-12, and finally went to Baltimore, where he was engaged in the capacity of inspector on the New Court House building. Here he formed a number of strong friendships and opened an office under his own name.

His work included some very delightful apartment houses, such as the "Homewood" Apartments, Washington, Canterbury Hall and Tudor Hall Apartments, and the house of the Furness Line.

At the time the Cathedral of the Incarnation was started Mr. Glidden, at the request of Mr. John Glenn, Jr., then Treasurer of the Cathedral Foundation, prepared a set of plans for the development of the Cathedral, which plans were the basis of the accepted plans later prepared by Mr. Goodhue. Mr. Glidden worked on these plans some years, including a trip abroad for the purpose of studying style.

Up to the moment of his death, Mr. Glidden had been actively engaged in preparing plans in the competition for the new college buildings for the Baltimore City College, being associated with Mr. Hobart Upjohn of New York.

The profession feels that a distinct loss has been sustained in his death.

HOBART UPJOHN.

George L. Morse

Elected to Fellowship in 1894
Died at Riverside, Conn., 8 November, 1924

George L. Morse, one of Brooklyn's prominent architects until his retirement in 1910, died at the age of 87 years.

He was born in Bangor, Me. His father was Timothy N. Morse, a builder and draftsman, who, with his wife, was descended from the early settlers of Massachusetts Bay. The younger Morse came to New York when

he was seventeen and entered the office of Jervas Wheeler, an English architect. He learned so quickly that he was offered a partnership, but before he could accept Wheeler had to return to England.

Mr. Morse set up his own practice in 1860, at the age of twenty-two years, with offices in the Brooklyn Post Office building in Montague Street. In his fifty years of professional work he designed many of that borough's principal buildings, among them the Bank of America, the Mechanics Bank Building, *The Brooklyn Eagle* Building, Abraham & Straus store, Temple Bar, the home of the Brooklyn City Railroad and the First Reformed Church. He was successful in the designing of residential buildings and it was not until the last twenty years of his active career that he planned any commercial structures.

He served for several years as an officer of the Institute. A son, Herbert B. Morse, survives him. His wife died many years ago and a younger son, George Tremaine Morse, also an architect, died in 1919.

John Howard Adams

Elected to the Institute in 1916
Died at Providence, R. I., 7 December, 1924

John Howard Adams, member of Jackson, Robertson & Adams, died after a serious illness of several days. He was born in Pawtucket 22 February, 1876. Graduated from Pawtucket high school in 1895, he entered the architectural school of the Massachusetts Institute of Technology. In 1899 he went abroad to continue his architectural training, spending a year in the ateliers of Paris and traveling and sketching, both on the Continent and in England.

On his return, he was associated with the office of Peters & Rice in Boston. After a short apprenticeship, he began an eight-year term in the offices of McKim, Mead & White at a time when that firm was carrying out many of its most monumental and important commissions. This experience was of great benefit and was to prove a most valuable asset in his future work.

In 1908 Mr. Adams came to Providence and while practicing for himself shared offices at 72 Weybosset Street with Clarke & Howe, who he at times assisted in their own work. Later, after opening offices for himself, he became, in 1912, a member of the firm of Jackson, Robertson & Adams, with which firm he had continued to be associated since that time.

An associate said of Mr. Adams: "Mr. Adams's ability was marked in the matter of design. The ideals of his profession he held very high and gave constantly of his time and strength to maintain them. He was an inspiring teacher to those draughtsmen who were privileged to work and study under his direction and his many clients have reason to know that their interests were always foremost in his mind, taking precedence at all times over interests of his own. His friends will enjoy always evidences of his work which remain as examples of his worth, his ability and his artistry. Few men are so privileged that their works live after them."

Mr. Adams was at the time of his death secretary of the RHODE ISLAND CHAPTER, and belonged to the Providence Art Club.

The Allied Architects Association of Los Angeles—VI

THE OPPORTUNITY to plan an Administration Center does not often knock at the door of the architect's office. There are so many factors involved; Federal, State, County and City Governments, Real Estate, Traffic, Public Utility and Commerce all have interests at stake. If ever, this is a subject for the consideration of many minds offering many points of view and many talents. Is it not logical that the planning of the Los Angeles Administration Center should be delegated to an association of architects and that the Allied Architects' Association of Los Angeles should be chosen for this important public service? It is hoped that its composite of personalities, its ability to arrive at definite decisions, its freedom from entanglements and its forcefulness in consummating public undertakings will result in an unprejudiced, clear-cut, masterly achievement.

The City of Los Angeles, in its youth, has never given deep consideration to the necessity for a city plan. It has been too busy growing, expanding and acquiring. So in its reception to the many new comers and new interests, it offers only a few isolated parks, a few large semi-public buildings and a dearth of public improvements and structures so necessary to the life of a growing metropolis. Now, while it is still young and still susceptible to important physical changes, the need for great public buildings and great public reservations will be met.

The County of Los Angeles and the City of Los Angeles, on 26 February, 1924, entered into a three-cornered contract with the Allied Architects' Association to define the scope of the Administration Center and locate therein buildings, streets, grades, walks and planting. The compensation was One Dollar. This new "Job No. 94" was quickly put into the process of solution. The many angles to the problem were focused by a long series of luncheons presided over by the Board of Directors, and including as guests, public officials, members of the Association and all persons who might contribute constructive ideas to the work. In the meantime a canvass was made of all City and County Departments and all public and semi-public organizations for technical data, reports and suggestions. By this means certain elements became fixed and certain buildings, streets, public reservations and

grades were defined. As a starting point, a certain section of the city was established for study by a straw vote of the people; from this area developed the major plan.

So, with certain facts ready for detailed consideration, the sixty-eight members of the Association began their individual study. No formal competition was invited; some members made sketches in their own offices, others directed sketches in the drafting room and some assisted in the development of the general plan of the production department in which their criticisms and suggestions were reflected. General meetings of the Association were called, some limited to members and others open to public officials. In this process of evolution over one hundred large scale precised plans were made. The final drawing with its accompanying data, reports, traffic, topographical and city plans will be presented to the municipal authorities the first of the year. It will show an area of three hundred and seventy-five acres laid out in the shape of a key. The bit of the key is a lower plaza devoted to buildings which are essentially for municipal business; the stem of the key is a long mall flanked by semi-public and secondary public buildings; and the handle of the key a large court on which the City Public Library is now being built, and around which other improvements are contemplated. The mall stretches over the hills of the city, adapting itself to topographical conditions, and enhancing the one dominant note of the natural beauty of the city. This long, wide sweeping park terminates at the highest point in a monument.

Around this area the flow of the traffic of the major highways can be accelerated, and through it, by means of tunnels and re-adjusted grades, sufficient streets penetrate to make this plan an improvement to the conditions of vehicular and electric transit. Beautification of the existing hills, ample provision for future requirements, coördination of existing points of interest, absorption and improvement of a great decadent district and improvement of traffic conditions are the most important essentials of this project. This is another illustration of collaboration combining not only the efforts of the members of one organization but also the many interests of a great community in working for a common cause.

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

Tests of "Nel-Stone" Walls (10a21). (*Technical News Bulletin, No. 82, Bureau of Standards.*) At the request of the Commissioners of the District of Columbia the Bureau has carried out some tests to determine the compressive strength of walls constructed of "Nel-Stone" building units and to determine the suitability of this system of construction for wall purposes. The "Nel-Stone" system makes use of specially constructed precast mortar blocks 12 inches square, which are laid up without mortar joints or beds. The units are so shaped that when set in place in a wall there are interconnecting, horizontal and vertical passages of circular cross-section throughout the wall. In these passages the reinforcement is placed and they are then filled with cement mortar of one to three proportions. Tests were made on nine walls, 6 feet long by 9 feet high, with thicknesses of 4, 6 and 8 inches. Three experiments were made for each thickness. The average strength of the walls at failure was 700 pounds per square inch. From the results of these tests it would appear that walls built with "Nel-Stone" units and in a manner similar to that used in constructing the test specimens compare favorably with common brick walls. Where the load carried by the wall is axial and no bending is introduced, any of the walls tested would be safe for a unit working load of 250 pounds per square inch.

Stucco and Plastering Investigation (21d). (*Technical News Bulletin, No. 85, of the National Bureau of Standards.*) In 1911 the Bureau started an investigation of Portland cement stucco, which is still in progress. Quite recently the results of various phases of the work were summarized and were used as the basis for an address by the chief of the cement section. The outstanding requirements to be considered in order to secure satisfactory stucco work, as indicated by these investigations, are as follows: Good stucco begins with proper design which involves two main requirements, adequate protective features and restriction of its use to vertical or nearly vertical surfaces. The requirements of design are well covered in the Standard Recommended Practice for Portland Cement Stucco of the American Concrete Institute. Masonry walls are best for stucco, not only because of their stability, but particularly because they afford a distributed anchorage, which is the most efficient way of preventing shrinkage. Frame walls, covered with metal lath, wire lath, or wire fabric, are satisfactory for stucco finishes, and accumulative evidence favors back-plastered construction or possibly paper-backed stucco in which the lath or fabric is attached to the studs, and sheathing is not used. With or without sheathing, however, stucco should give good service and justify its use through its attractiveness, its fire resistive value and its reduction of maintenance cost. In employing stucco the usual requirements for materials should be given proper weight, but far more depends upon good and intelligent workmanship. Emphasis must be placed on the proper fastening and tying of the lath and fabric as essential to the success of stucco on frame structures. The plasterer should be made to realize that elimination of crazing and other ear marks of the

apprentice depends upon him, because the control of suction and the proper time for finishing are what he is supposed to know. Upon his knowledge and skill must depend the satisfactory execution of fine finishes, because the art of finishing cannot be written into specifications. Mixtures not richer than 1 part of cement, 1-5 part of hydrated lime by volume and 3 parts of building sand, are recommended for stucco. Finished coat mixtures should not be richer than the under coats, and it is preferable to have them leaner. The actual proportions of ingredients, including water, are much less important than the plasterer's knowledge of what he is using and how to use it. It should be remembered that the finest textures can be used with assurance of avoiding conspicuous defects only on masonry structures. On frame structures, it is far safer to use the rougher textures, because small cracks and other defects are thus concealed and are not objectionable. Last of all, there is the great gap between the ordinary plasterer and the stucco specialist. More important than the choice of materials or specifications in the present state of the art is the selection of some one who has achieved a reputation for good work in this particular field.

Physical Properties of Materials: I. Strengths and Related Properties of Metals and Wood (Misc.). (*Circular of the Bureau of Standards, No. 101, Second Edition.*) This circular represents a compilation of the most probable values, from a testing engineer's viewpoint, for the tensile, compressive and shearing strength; ductility; modulus of elasticity; and other related properties of pure metals and their alloys and of wood. In addition to these, and whenever the existing data warranted, the circular gives the properties of metals at elevated temperatures and their fatigue and impact properties. Values for other physical properties include those for specific gravity, melting point and the co-efficient of expansion.

Properties and uses of less commonly used metals are described briefly.

Graphical representation is used in many cases to show the effect of heat treatment, temperature and other conditions on the properties of a material.

References to the sources are given for all values in the circular. These include the experimental results published in American and European technical periodicals, the specifications of technical societies and of Government departments and unpublished results of the Bureau of Standards.

Herbaceous Perennials (38e4). (*United States Department of Agriculture, Bureau of Plant Industry, Farmers' Bulletin, No. 1381. Size, 6" x 9". Pages 91. Illustrated.*) Contents: Hardy perennial plants. Use of herbaceous perennials. Arrangement. Culture. Gardens and borders. Beds among shrubbery. Naturalized plants. Rock gardens. Wall gardens. Wild gardens. Propagation. Kinds to use. Regions with similar growing conditions. Adaptability of different kinds of plants. Index of common names.

Disintegration of Stone from Efflorescence (8b). (*Technical News Bulletin No. 89, National Bureau of Standards.*) In studying the weathering qualities of natural stone under actual conditions of use, frequent examples have

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been noted where disintegration occurred in comparatively new buildings of limestone, sandstone and even granite. Such cases could not be attributed to the action of frost or the usual destructive agencies of the weather because under ordinary conditions the stone should not show signs of decay sooner than 40 or 50 years. These cases could nearly always be attributed to the formation of efflorescence due to the leaching of water through the parts of the masonry. About a year ago a series of tests was started at the Bureau of Standards to determine how severe the effect of efflorescence is on masonry. Twelve limestone panels which had been previously constructed for another test were utilized for this purpose. Blocks of stone with cup-shaped holes in the top were placed on the panels to catch the rain water and cause an excessive amount of leaching through the stone work below. In a short time considerable efflorescence formed where the water leached through to the surface of the stone, and, within a year decay of the stone at these places was noted.

These experiments were contrived to accelerate the action which actually occurs in buildings where the rain water is allowed to penetrate the masonry in excessive amounts as through window sills, the cornice or coping and brings the water-soluble matter to the surface. The crystallization of the dissolved matter in the pores of the stone during the drying process causes decay similar to that due to frost, but much more rapidly.

Fire Test of a Theatre Curtain (35a1). (*Technical News Bulletin No. 84 of the National Bureau of Standards.*) The test just completed is the last of a series in which the types of curtains now in use were included and in the course of which some new types and improvements were developed. The first curtains tested were of the rigid steel type having a sheet metal face on the auditorium side and an asbestos board covering on the stage side, with structural steel framing between them, the total thickness being about 7 inches. This type of curtain held back fire, smoke and glow for a period of over a half an hour, which gives more than ample time for the audience to leave the theatre, the exit facilities of which are usually arranged to empty the house in 5 minutes or less. Tests were then made of the ordinary single asbestos cloth curtains. These were found rather inadequate as fire stops, the cloth losing strength readily when exposed to fire, while the single thickness permitted smoke and glow to show on the auditorium side. An asbestos cloth was then developed having fine monel, nickel or chromium-nickel alloy wires woven into the asbestos which retained its strength much better than the plain or brass wire reinforced cloth, but as tested in single thickness considerable smoke and glow still showed on the unexposed side. Tests were then made on curtains of two plies of cloth, the one just tested having the front and back asbestos cloth facing separated by a metal frame-work which connects with guides, trolleys and track at the side in such a way as to maintain the curtain in place and enable it to operate under considerable pressure as from wind or drafts produced by a fire. Improved details were also provided to prevent smoke from passing around the edges of the curtain.

The results of the test of this curtain can be regarded as fairly satisfactory. Very little smoke, and almost no glow showed on the unexposed side during the test which lasted for 15 minutes. At the end of this time a temperature of 1700 degrees F. was attained in the furnace, which corresponds to a very bright red heat. A curtain made similar to the one tested would weigh about one-fifth of that of a rigid steel curtain of the same size which would permit installing it in buildings that could not carry the heavier curtain.

U. S. Government Master Specification for Battleship Linoleum (2811). (*Federal Specifications Board Specification No. 209, adopted 30 July, 1924. Circular of the Bureau of Standards No. 191.*) *Grades.* Battleship linoleum shall be graded according to thickness, as light, medium, and heavy. Light battleship, average thickness 0.142 inch, is commonly known as "A" gauge; medium battleship, average thickness 0.187 inch, as three-sixteenth inch; and heavy battleship, average thickness 0.235 inch, as 6-mm linoleum.

Material and Workmanship. Battleship linoleum consists of oxidized linseed oil, fossil or other resins, and rosin intimately mixed with ground cork and pigments and pressed on an unpainted burlap backing. Some wood flour may be added in the manufacture of gray and other light colors to obtain the proper shade.

General Requirements. Color and Finish. The surface shall be smooth and free from streaks, spots, indentations, cracks, and protruding particles of cork. The color and finish shall match a sample mutually agreed upon by buyer and seller.

Width. Seventy-two inches \pm 1/16 inch, unless otherwise specified. *Burlap Backing.* (a) *Key.*—The burlap shall be deeply embedded and keyed to the linoleum mix so as to be partially concealed in it. A pull of not less than 6 pounds shall be required to separate it from the linoleum mix on a strip 3 inches wide. (b) *Finish.*—The burlap shall not be painted.

Indentation. The linoleum shall not show an indentation of more than 0.010 inch one hour after it has been subjected to a pressure of 80 pounds applied for a period of 60 seconds on a flat-ended cylindrical steel bar 0.282 inch in diameter.

Detail Requirements. Seasoning. The linoleum shall be thoroughly seasoned. The surface of a clean, fresh cut made at an angle of 45 degrees in the case of light battleship shall show no difference in color or grain between the outer edges and the center. In the case of medium battleship a difference in color in the center not to exceed one-fifth of the thickness of the cut surface will be permitted. In the case of heavy battleship a difference in color not to exceed one-third of the thickness of the cut surface will be permitted.

Thickness:

Kind	Minimum	Maximum
Light	0.137 inch	0.147 inch
Medium	.182 "	.192 "
Heavy	.230 "	.240 "

Minimum Weight per Square Yard:

Light	6.5 pounds
Medium	8.0 "
Heavy	10.5 "

Pliability: There shall be no cracking or breaking when the linoleum is bent over the mandrels of the following diameters, respectively:

Light	2 inches
Medium	2½ "
Heavy	3 "

Water Absorption (24 hours at 21 degrees C. [70 degrees F.]):

Maximum Absorption:

Light	5½ per cent
Medium	4 " "
Heavy	2½ " "

NOTE: This circular also contains specifications for Method of Inspection and Tests, and Packing and Marking.





ROME—THE CLOISTER, CHURCH OF ST. JOHN LATERAN
Harold C. Whitehouse

